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HEMPEL'S THEORY OF COGNITIVE SIGNIFICANCE

I

Introduction :

Although the criterion of empiricist significance is an essential part of the positivistic programme, yet it is in the writings of Carnap and Hempel particularly, that we have a systematic discussion of the concept of cognitive significance. Generally speaking the verifiability theory of meaning has been put to two kinds of uses by the Vienna Circle.

(1) As an essential weapon of their anti-metaphysical objective. It is this aspect which is dominant in Schlick and A. J. Ayer.

(2) As a part of contemporary empiricist philosophy of science. This is a chief concern of Hempel.

Hence Hempel's discussion of the verifiability theory has certain distinctive features.

(1) It is in his formulation that an attempt is made to give a formal statement of the criterion.

(2) He is also concerned with some crucial problems like that of dispositional and theoretical terms which arise for the verifiability theory.

(3) Hempel also undertakes a detailed discussion of the status of the concept of laws in connection with the empiricist theory of meaning.

Hence it is in Hempel's formulation that we get the positive aspect of the verifiability theory. The present discussion is focussed essentially on Hempel's writings.

Three general aspects of Hempel's discussion may be noticed here.

(1) Hempel's formulation of the problem clearly shows the connection between the verifiability theory on the one hand and the analytic synthetic distinction on the other.

(2) Hempel also elaborately explicates the purely formal and technical problems in the way of a precise formulation of the criterion.

(3) On a more philosophical level, Hempel emphasizes the fact that empirical significance belongs to the entire discourse primarily and not to separate terms and sentences within the discourse.

(4) Lastly, Hempel also brings out the point that having empirical significance is a matter of degree such that the question is not of having significance or lacking it but one of a level and depth of significance.

These special features serve to liberalize the theory of empirical significance.

II

It was the opinion of Aristotle and Thomas Aquinas together with many other eminent philosophers of ancient and medieval periods that science necessarily needs universals which can be supplied only with the aid of our intellect. The existence of sciences without universal concepts cannot be maintained. This creates a difficult problem for the logical positivists in general, since following the great empiricist Hume they are prompted to deny the value of anything that cannot be empirically verified. Hempel makes this point clear in one of his works; he says : "The fundamental tenet or the principle of modern empiricism is the view that all non-analytic knowledge is based on experience."[1] To this principle of modern empiricism, an additional maxim has been added by contemporary logical positivism, viz., that a meaningful assertation can consequently be said to be true or false, only if it is either analytic or self-contradictory or capable at least in principle of experiential test. Here we are at great turning point of the history of philosophy, since it is a radical denial of many of the formulations of traditional metaphysics and large parts of epistemology as psuedo-hypothesis.

Hempel feels the need of elucidating these formulations of empiricism and its criterion of meaning since according to him they give only a general and vague characterization of the basic point of view. He does this task by analysing in detail the logic and methodology of empirical science and by clarifying and restating the basic ideas of empiricism. It is to be seen whether this research of Hempel draws conclusions that justify empirical sciences only or if he spares a possible existence of metaphysics. In still clearer terms, it remains to be examined, whether our author considers as having 'sense' or 'meaning' only propositions of empirical science, viz., those that can be observed and verified and the rest, especially propositions of metaphysics as mere tautologies with no meaning at all. This seems to be the general stand taken by almost all the exponents of logical positivism in general.

That criterion, which requires experiential testability for a sentences to be meaningful, as is the empiricist criterion must explain first of all what is meant by testability and verifiability. Hempel is conscious of this necessity and has tried to do it in several of his works, with various modifications and an obivious evolution, which according to him reflect an increasingly refined analysis of the structure of empirical knowledge.

Hempel, in his study of the changes in the empiricist criterion of meaning introduces a preliminary expository formulation of the criterion as follows : A property or a relation of physical objects is an *observable characteristic*, if, under suitable circum stances, its presence or absence, can be ascertained through direct observation. Terms which designate such observable characteristics are to be called *observation predicates*, and any sentence which correctly or incorrectly asserts of one or more specifically named objects, that they have or lack some specified observable characteristic, is to be called an *observation sentence*.

The above formulation of an observation sentence belongs to what Carnap has called the thing—language, for such a thing—language alone seems adequate for the procedures of inter-subjective testing. However, if one adopts the epistemological point of view, one could reformulate the observation sentences, in phenomenalistic terms as referring to perceptions and sensations. Here at the very outset, however, a philosophical problem arises. We saw that there is a choice between the thing—language and the phenomenalistic language. However, Carnap in his "The Elimination of Metaphysics through the logical Analysis of language" seems to suggest that such a choice does not give rise to any problem, but as A. J. Ayer points out for one thing, the question of solipsism turns on the choice of the basic language and even if we dismiss the *formulation* of the question of solipsism or realism in the old manner as senseless, yet it reappears as at least "an external question" in Carnap's revised terminology and can hardly be ignored. Here is an instance to substantiate, Felix Kaufamann's thesis, that in logical positivism, all the old issues are preserved in a new form.

Be that as it may, we can formulate the empiricist criterion of meaning in terms of observation characteristics, observation predicates and observation sentences, as follows :

A sentence S has empirical meaning if and only if it is possible to indicate a finite set of observation sentences, such that, if these are true, then S is necessarily true also. As pointed out by Hempel, we must impose two restrictions on this formulation.

(*a*) The sentence S should not be analytic.

(*b*) The finite set of observation sentences should be logically consistent.

The first restriction is necessary because in the new logic, an analytic sentence is implied by all true sentences, while the second restriction also is necessary because an inconsistent class of sentences, implies any sentence whatsoever.

With these two restrictions duly added we have the criterion of complete verifiability. As pointed out by several writers, such complete verifiability has serious defects.

(A) It rules out all sentences of universal form. Thus general non-enumerative laws cannot be expressed as proper sentences; they can be presented as "free variables" in Kaufamann's terms.

(B) It rules out sentences with mixed quantifiers. In these two ways, it is overly restrictive. But in two other respects, it is too inclusive.

(*a*) It allows an alternation to be significant provided one of the alternants is empirically meaningful; the other might be non-sensical. Thus, when N is a non-sensical statement, considered by itself, S v N is significant, according to this criterion. However, this particular criticism doesn't seem to be so very strong for the rule that an alternation is implied by either of its components applies only if N, no less than S, is a *statement*, a sentence which is either true or false, but in this case, N cannot be said to be either true or false, and thus is no statement at all. This is essentially the point made by D. Rynin in his " Vindication of Logical Positivism".

(*b*) According to this criterion, a purely existential statement such as "$(\exists x)\, Px$" is meaningful, because completely verifiable, but its denial namely "$(x) \sim P\, x$" is meaningless, because it is a universal sentence. But this seems to violate the fundamental logical principle that if a sentence is true or false, then its denial must be false or true or we must deny the principle of double negation in the manner of Intuitionists.

These difficulties suggest that we may have to re-formulate the criterion in terms of the notion of falsifiability. Now, a sentence has empirical meaning if and only if, its denial is not analytic and follows logically from a finite and consistent class of observation sentences.

Before we proceed to discuss the logical merits and drawbacks of the falsifiability criterion, it is well to remind ourselves of a few historical details. The idea of using theoretical falsifiability is, as we all know, due to Karl Popper. But Popper himself has repeatedly and specifically told us that criterion of falsifiability is only applied by him as a *criterion* of *demarcation* and not as a *criterion of meaning*. He has pointed out that this criterion as applied by him, will not characterize metaphysics as nonsensical. Popper has further asserted that the positivists search after a criterion of meaning is a futile one and in no sense his own. Accepting for the moment, his distinction between a criterion of meaning and a criterion of demarcation, we may raise two interesting questions.

(*a*) How far is it justifiable to claim, as Popper does, that it is the " inductivism " of the positivists which leads to a false identification of the two criteria, and that in a " deductivism ", such as Popper's the two criteria are clearly separated ?

(*b*) Further, still, granted that the two criteria are distinct, can we yet justify that the search after a criterion of meaning is mere " Psychologism " and as such is of no concern to epistemology which deals with the context of explanation and not of discovery ? Or, should we insist, with Werkmeister that the criterion of meaning is central to any epistemology ?

These issues are specific to Popper's thought provoking book " The Logic of Scientific Discovery " and they sufficiently characterise his system as something distinctively different from logical positivism. Coming to the logic of falsification, it is easy to see how it admits universal statements, unlike the criterion of complete verifiability. But conversely, a singular existential statement such as " $(\exists x)\ Px$ " is ruled out, since it cannot possibly be conclusively falsified. Perhaps we may point out that Popper himself regards such existential statements as " decisional conventions ". Thus he writes " Science does not rest upon a bed—rock bottom of absolutely given facts ". The bold structure of its theories rises, as it were, above a swamp. It is like a building erected on piles. The piles are driven down from above into the swamp, but not down to any ' natural ' or ' given ' or ' absolute ' base. When we cease our attempts to drive our piles into a deeper layer, it is not because we have reached firm ground. We simply stop when we are satisfied that they are firm enough to carry the structure at least for the time being ". And further anticipating Austin's " performatory utterances " Karl Popper compares the procedure of testing to a judical trial. Thus it is clear that for Popper, an existential statement is a decisional convention and not an absolutely given datum. In this, he is one with Neurath in rejecting the " absolutism of the given ". Incidentally it is worth noting that to propose that we regard an existential statement as a convention is to propose a radical change of the ordinary use of language. Popper himself is fully alive to this " Constructivist " nature of his theory, for he writes: " My criterion of demarcation will accordingly have to be regarded as a proposal for an agreement or convention."

This point is worth noting and can in fact, be generalized. While discussing the criterion of verifiability, we saw that, on a strict application of the criterion, law-statements will have to be reformulated as what Ramsey called " hypothetical variables ". Now to propose that we call a universal statement, as a free variable, which can be " presented ", but not asserted is to propose what Carnap has called " a definitional convention ". Similarly to propose, as Popper does, that we regard an existential statement as a 'a decision' is to propose a definitional convention. It is clear then that both the criteria, because of their completeness, entail radical linguistic proposals. As Morton White has shown any complete or non-finistic criterion can only be a convention.

Hempel believes that interpretations of the testability criterion in terms of complete verifiability or complete falsifiability are inadequate because they are overly restrictive in one direction and overly inclusive in another and because both of them require incisive changes in the fundamental principles of logic.[2]

We have been mentioning time and again the notion of verifiability without having seen its precise meaning in empiricist conception. Let us now try to throw some light on this topic. Hempel says that in empiricist literature, the term " verifiability " is used to indicate the conceivability or better, the logical possibility of evidence of an observational kind, which if actually encountered, would constitute conclusive evidence for the given sentence; hence it is not intended to mean the technical possibility of performing the tests needed to obtain such evidence and still less does it mean the possibility of finding directly observable phenomena, which constitute conclusive evidence for that sentence.[3] This point of view of the logical empiricist exludes the definition of verifiability as the actual existence of a set of conclusively verifying occurrences which was proposed by B. Russell.[4] In the words of Hempel such notions of verifiability are in no way acceptable to the logical positivism.

Here Hempel shows the modifications of the earlier insistence that each statement of empirical science should be fully verifiable or falsifiable by means of observational evidence. They can be reduced to these two :

(1) " By the recognition that a scientific hypotheses cannot, as a rule, be tested in isolation but only in combination with other statements so that the criterion of testability has to be applied to comprehensive systems of hypotheses rather than to single statements; and

(2) By replacing the overly rigid standard of verifiability or falsifiability by the more liberal requirement that a system of hypotheses must be capable of being more or highly confirmed by observational evidence.[5]

The consequence of this, the idea that each scientific term should be capable of definition in terms of observables, will then be broadened by the application to a whole system of terms, connected by laws and definitions within a theoretical network and the replacement of the requirement of complete definition by that of partial interpretation.

Hempel considers it futile to search for an adequate criterion in terms of deductive relationships to observation sentences because of the negative result that such a criterion would bring along. Hence he disqualifies as criteria of cognitive significance both complete verifiability and complete falsifiability. In substitution to these he suggests *translatability* into an empiricist language as a new criterion of cognitive meaning, i.e., to say "A sentence has cognitive meaning if and only if it is translatable into an empiricist language."[6]

Hempel attests that empiricist language, as any language, can be characterised by indicating its vocabulary and the rules of determining its logic; the latter include the syntactical rules according to which sentences may be formed by means of a given vocabulary. "In effect, therefore, the translatability criterion proposes to characterize the cognitively meaningful sentences by the vocabulary out of which, they may be constructed and by the syntactical principles governing their construction. What sentences are singled out as cognitively significant will depend accordingly, on the choice of vocabulary and of construction rules."[7]

Even the translatability criterion, despite of its comprehensiveness, appears to our author as too restrictive since it obliges one to reject as devoid of cognitive meaning, all scientific hypotheses, whose constitutive empirical terms are not explicitly definable by means of observation predicates.[8]

University of Poona.

Sofiamma Joseph
Kuruvachira

NOTES

1. C. G. Hempel; Fundamentals of Concept Formation in Empirical Science.
2. C. G. Hempel, The Empiricist Criterion of Meaning, in A. J. Ayer—Logical Positivism—p. 108.
3. *Ibid.*, p. 114.
4. B. Russell, Human Knowledge, New York, p. 448; in A. J. Ayer—Logical Positivism—pp. 113, 127.
5. C. G. Hempel, The Fundamentals of Concept Formation in Empirical Science, Chicago, 1952, p. 43.
6. C. G. Hempel, The Empiricist Criterion of Meaning, Op. cit., pp. 116–117.
7. *Ibid.*, p. 117.
8. Cf., *Ibid.*, pp. 109, 118–119.

IDENTITY—IS IT A MISNOMER?

Before we can appreciate the title question, it is necessary to explore the contexts in which the word is entertained. No one, I think but a non-philosopher is clear about what he means by identity. Philosophers are yet finding a ground which can work as a common platform for discussing identity. Non-philosopher does not bestow upon himself the responsibility of giving a view on what he means by identity. But he can point out instances. He will point out two billiard balls, or even a pair of twins, and call them identical. In some extreme cases, even a parallel thought, or a theory may be called identical, especially when a comparative study in some theory is made.

Granted that the above instances mark a lose usage of the word identity, which could easily be replaced by some such 'milder' words as resemblance and similarity; nevertheless, it has served to give philosophers a hint. Philosophers have arbitrarily classified 'identities' into different types. The general headings that one comes across are personal identity and material—object identity. But we are acquainted with the form of identity statements are equations showing identity in logic and mathematics. We may call it formal identity.

Now, in order to decide the nature of 'identity' we will be required to analyse the way it functions. I have conceived two (at least) aspects of the word.

I. Identity is a standard unto itself : To decide the 'changelessness' through spatio-temporal continuity. A 'thing' is its own standard. (The question of formal identity is indifferent to such a standard. Spatio-temporal continuity is out of question). A person too, is his own standard. Thus, this aspect of auto-standard could be discussed only in personal and material object indentity and not in formal identity. It may be argued that formal identity of the nature $x = x$ can also be an auto-standard, since we may appeal to the rules of syntax which will expose the redundancy, and hence the 'changelessness' of 'x'. But if we do not want to call identity statements (or formulae) redundant or truism, then we are implicitely advocating different types of rules not syntactical. And if so, then 'x' will have to be interpreted, The question sign then no more remains a 'Constant' but varies in relation to the nature of 'x'. Thus, the alternative is between (i) calling $x = x$ a truism or redundancy, and (ii) interpreting 'x', and thus inventing another criterion for comparison.

Needless to discuss the identity $x = a$, where variables are evidently different in some respect, despite the equation sign.[1].

Maximum fulfilment of this criterion of auto-standard is observed in personal identity. The form of the controversy now wears a precise terminology. Instead of asking 'what is self', it is now asked, 'what is personal identity?' What is it that helps recognition of a person as the same Mr. X irrespective of spatio-temporal gaps and other alternations? The answer was there, it is the 'essence' said the essentialists. Vedantins, in general, argued that it is the 'essence' alone which could remain unaltered in a person; all other adjuncts that suffer alterations are accidental. Such arguments are comparable to some western essentialists too. Yet, the issue remains unaltered, perhaps it was the perplexity of this question which has lead philosophers along the trail of 'change' instead of 'essence'. A rigorous example is Buddist theory of flux; there are some milder instances of evolutionary philosophers who support an 'essenceless' person, so that 'needless' questions such as one we have raised could be evaded. Nevertheless, they could not be brushed aside so easily. Beyond doubt, the recognition of a person as the 'same person' is problematic to philosopher. (Needless to elaborate a trivial point that strangers to Mr. X are eliminated.) The difficulty is same, though its expression is novel, like old wine in new bottles. We are acquainted with it since philosophers began to ponder over what to call an essence, substance, unity and now, identity of an object (material) or a person. Traditional answers were propounded as that which exists in itself and is conceived through itself; or, even as that which is 'changeless', which could be 'identified' despite 'apparent' changes: metaphors had played their dramatic roles there which of course were condescendingly allowed to persist by the empirical schools due to their explanatory value through analogy.

It is necessary to give an understanding as to what we would accept as the essence of a thing which would form the criterion of comparing things for identity.

A. J. Ayer rejects personal identity; when argued how is it that a reference is possible, he answers, 'How else should we talk ?' We either describe a thing, or we point out (that is, demonstrate). This does not mean that reference is made to an 'entity'. If the description of a thing does not satisfy us, then we try to point out'. (refer 'Concept of a Person').

Fallacy, is evident. On the basis that *some* things could be described 'satisfactorily', he jumps to the conclusion that *all* things could be described (presumably) satisfactorily.

And of course, what should satisfy a description is a different problem to which philosophers have replied quite ably. They say that it is not necessary to ask further questions if descriptions are sufficient to fulfil an expectation.

Waismann concedes to this view to the point of even dissolving a paradox. He gives the example of a liar. By saying that there are stratas of language he avoids the so-called contradiction that would otherwise arise. An elementary proposition does not contradict a proposition of the first order which includes all elementary propositions that go to describe anything. Second order propositions will include proposition of first order, and elementary propositions; and so on (refer 'Language strata').

Now, can this standard of self-identity be also applied to material objects ? At least with articulated objects and the objects with definite profile, there should be no problem. The 'essence' is their 'identity'. Is then 'identity' a standard or is it 'essence' of an object ? I would say that we compare at least two objects for identity, by appealing to their essence, their self-identity. Hence, if they retain their identity even when compared, then they are identical.

Then what about those non-essential adjuncts ? Should they be discarded while comparing objects foı their identiry ? (Or properly still, for identical qualities or identical essence?) If we can decide to talk of 'identity' only to mean essence and essence alone, then merely calling the things, 'identical' would carıy the meaning essentially.

II. Identity as a criterion :

I would now consider the other aspect of identity, the criterion or standard on basis of which things, persons or concepts are compared for their identical nature.

Often, the equation sign was considered as sufficient standard of comparing the two expressions that flanked its either side. Wittgenstien objected to using a sign for identity and insisted on looking for a 'sign' of identity. Accordingly, Russell's definition of equation sign was criticized by him as inadequate to explain identity, because 'We canot say that the two objects have all the properties in common' (refer Tractatus, 5, 53; 5.530). Thus, comparison is fruitless; 'To say that a thing is identical with itself, is to say nothing at all'. Thus there is an attempt at limiting the concept of identity to the standard, or criterion which it is argued, no two objects can satisfy simultaneously.

Taking the meaning of the word object in common parlance, we can now forsee the dilemma. Either we must allow them as identical objects (on basis of maximum comparable properties), despite spatio-temporal discrepancy between them which is found to be between two numerically different objects. Or, we should abolish even that, and call them identical, not by comparing their properties but for possessing 'Identical' essence. This is about numerically difierent objects; here, identity is a misnomer : things are more or less similar, and that is all.

In formal logic and mathematics, Identities, or identity statements are characterised by equation sign, or even by a copula. They serve as the standard of comparing expressions for identity. However, there is no unanimity of interpretation, as far as such signs and copulas which suggest identity, are concerned. Their interpretation is governed by the nature of terms that constitute the expression. These terms in their turn, gather their meaning from their context. So, it is the context that gives the stock of rules that will have to be consulted while interpreting identity signs. These rules are different; they are syntactical, semantical, or even mathematical. They involve the meaning of the term in their extension and intension.

Thus, there is no unanimity even at this stage over the concept of identity. But, even if we did not argue thus, the impropriety of calling two expressions identical on the basis of sheer identity sign between them, rules out the application of the word identity. At most, they are equation statements. And hence the trivality of calling $x = x$ as identical is obvious.

The entire discussion on identity could be summarised thus :

(i) Identity, as a self standard as in the case of personal identity.

(ii) Identity, as a standard of comparison as in the case of more or less similar things. Though maximum comparison is evident in two numerically different objects otherwise same, spatio-temporal difference yet persists.

(iii) Identity, as a sign of equation or even as copula; but the two expressions which are related by this sign, will have to depend upon the interpretation of these signs.

(iv) However, we may allow redundancy, analiticity, tautologies and even the interpreted symbolisation $x = a$ as 'The morning star is the same as the evening star', to be called identity statements. They satisfy the criterion of comparison though of course with different explanations than the former ones.

The criterion of comparing the two expressions 'the morning star' and 'the evening star' for identity, shall be exposed if we interpret the equation sign. The equation sign cannot be interpreted as a purely formal equation—which could be governed by formal rules. Nor is it interpreted as totally referential, because, as Frege pointed out in his celebrated paper 'Sense and Reference', they have, inspite of that, different sense. Therefore, the identity is not due to the equation sign alone, nor due to same reference, but due to a juxtaposition in which the total contextual[2] import is concentrated. When the equation sign is thus interpreted as the sign of identity. then the nature of such a complex will necessarily be contingent and not necessary. That is to say it may not be true by the rules of model logic. But identity is contingency, not necessity; if it is necessary, it would be trivially true.

M. S. U., Baroda **Yogini Nighoskar**

NOTES

1. The 'equation sign' is often interpreted to mean a sign for identity, since equation sign is 'stricter' than equivalent sign. However, there is no sign that could strictly be used for identity. Maximum confusion of identity with milder interpretation is due to this.

2. Frege calls it the connection between signs, sense and nominatum.

IMPOSSIBILITY OF EXISTENTIALISM

In an eminent Frenchman of this century philosophy and literature are said to have overlapped. Both his metaphysics and his novels are known as 'Existentialistic'. It is due, perhaps, to him that 'Existentialism' has been one of those rare philosophies which are well known by people other than philosophers. But there is a sharp qualitative distinction between metaphysics and literature. Though we speak of 'understanding' both a novel and a philosophy (modern poems are often accused of ununderstandability) "understanding" is a less rigid and objective matter in literature than in philosophy, because after understanding one can call a philosophical system and not a short-story "wrong". And a philosophical passage has fewer meanings than literature. For this reason, I think, Existentialism as a literary movement is more easily talked of, with less risk of confusion. Even confusion in literature is often acclaimed as adding a mystical flavour to the work. But in philosophy, especially in present day metaphysics, confusion, if detected, is never forgiven. Remembering this difference, we should make it clear from the outset that this essay has no tendency to speak ill of Existentialism as a literary movement. Here we are concerned with the metaphysical doctrine called existentialism. And the following pages will try to show that such a doctrine is impossible.

As I have already said, "Existentialism", even as a philosophy, is not as foreign to non-philosophers as other systems. But this very popularity, together with the inherent muddles of this movement, has made it nearly undefinable. Though a definition is hard to give, a description can be attempted. In the following few lines, I shall try to sketch the outlines of this many-faced philosophy, to give the reader an idea of what I refute.

An Existentialist is one who says :—Too much emphasis on abstract thinking and deductions from pre-defined concepts have hitherto taken philosophy farther and farther from reality. Fascination for objectivity, universality and demonstration is quite becoming of a scientist. But a philosopher should be introspective, self-absorbed and subjective in his point of view. Before knowing things that are outside him, man must know himself. The reality of the external world, however obvious it may seem to common sense and scientists, is atleast less directly given to us than the reality of our own self. It is our own private unique existence which is inextricably 'glued' as it were, to all our experience. We cannot exhaust it by definition, by concepts or by universally intelligible public words. What I mean by 'I' is never adequately grasped in the same way by 'You' or "He". This ineffable subjective selfcertitude should be the starting point of metaphysics. When we try to bring it under our general names—(which, in their turn, are derived through generalisations, from the outisde world)—we persistently fail, and viewed from outside this true and full 'being' of the self is equal to nullity, as Hegel said, "pure being and pure nothing must be one."

This 'I' is free to choose its own mode of being. Man, as the mystery of birth shows, is unable to choose, in a sense, his own existence. It is forced upon him. Nevertheless, even in this "thrown"—situation he has a basic freedom of choice. A person may be compelled to be an invalid but he can choose the way in which to regard his infirmity (as "intolerable" "humilating" "to be concealed" "to be exhibited to all" etc.). And since one cannot be an invalid without choosing this *manner* of being one, and since hs is free in this latter choice, he is free. It is the same with man's past, which, though as such thrust upon him, may be lived through again in a freely chosen manner. But this absolute freedom of the individual man is more of a curse than a boon. With it, we tremble in "Angst" (— a typical dread) before every step of existence—that portends "Death"—because ours is a being charged with nothingness. Thus the unbearable burden of responsibility hangs heavy over all personal existence. Without feeling this 'Angst' we can never know the meaning of reality, which to us, means the being of the unique subject. All our efforts to interpret or see through Reality by the help of abstract ideas, reason, or selfevident principles make the distance between the subject and the object greater. It is intellectually futile, morally degrading, politically tyrannical, and socially ineffective to see the individual as an 'instance' of a genus, as an embodiment of a universal, or as a tiny episode in a totalitarian History. It is high time that philosophers should point out the mistake of both the Idealists and Realists in understanding a human individual as a spiritual or material unit respectively as 'thought' or 'thing'. We should not, like idealists, shape reality according to our own ideas, or like Realists blindly follow the lead of objective sciences. Recognising the direness of Time and Death, we should make best use of our freedom—in doing rather knowing, in willing rather than thinking, in 'feeling' Reality in its pure nothingness, rather than in "understanding" it.

(I)

" What philosophers say about Reality is often as disappointing as a sign you see in a shopwindow which reads : Pressing done here; if you brought your clothes to be pressed, you would be fooled, for only the sign is for sale " said Kierkegaard.

The advancement of knowledge has recently become unfortunately violent. Almost all its branches have gone to a self-stultifying depth. To hear physicists declare that "matter" is a myth and psychologists abjure terms like "mind" is no less odd than listening to a cobbler's lecture on the absurdity of such a thing as a boot or a tailor's dissertation on the efficacy of nudity. Yet, just the same has occurred with the philosopher, who, one regretfully admits, has been hitherto mostly mimicking the Scientist's ways ever since he lost his ancestral lordship over the latter. When the physicists began to praise priests, psychologists, physiologists, mathematicians, poets and poet economists, philosophers too hastened to keep pace witht his age of reaction. In order to praise " Unreason ", their age-old adversary, they spat on " concepts ", " system ", "rationalisation ", " universals " "Transcendence "—all the hitherto—pivotal terms of philosophy and thus became existentialists. Too much dabbling in any subject soon makes it seem insipid and empty. The reactionary movements of Jeans and Eddington in Physics, of Watson in psychology, of the " primitivists " in art and literature (also in dresses) and finally of Existentialists in speculative philosophy, are also, to translate a Bengali adage, such bitter drops of an over pressed lemon. They arise out of a boredom, a " nausea " (to borrow a word from *that* remarkable French man)—a disgust in what has been pursued too far for too a long a time. Hence they antagonise their own lineage. Such reactions are emotionally justified for they are bound to come. There is no shame therefore in being a reactionary. For you cannot avoid being one unless you are uncaused event. We cannot, therefore, look pejoratively at an Existentialism simply because it is reactionary. To oppose it, then, would be equally reactionary and hence contemptible.

But there is a characteristic danger in reacting against rationality and yet claiming philosopherhood. However, tired you may grow with logic, you cannot declare it false. One can at least leave it for the time being and relax in poetry or women. But one cannot call it false, because calling it false presupposes logical laws; one can neither 'think' it false, because thinking presupposes those laws as well. This may sound like a Hegelian platitude and in fact this truth cannot be spared this look of a cliche. Nevertheless, it cannot be doubted, save by an avowed idiot or a deliberately dumb person that language, if not thought, has some basic rules of consistency, violation of which produces senseless gibberish. A man is sure to talk such nonsense if he says that the laws of logic are invalid, that A *can* be not—A, that being (of Sartre's " for it-self ") involves nothingness, that something could be " defined as being what it is and not being what it is ", that " Man first is....etc. " and again that " Man is not, but makes himself." It is unfortunate that Hegel who taught us the inescapability of rationality, himself started the tradition of preaching such classical non-senses. Following his lead Heidegger and Sartre developed a systematic disorder with " concepts "—which the existentialist thought were distortions of reality and hence could be further distorted. But all this is bound to be internally incoherent, for reason which is the basis of coherence is over-thrown here. Thus, irrationalism in philosophy is bad, not because it is reactionary but because it is suicidal.

And as such, at least one of its representative tenets has been long exploded by Carnap in his article in Erkenntnis (Vol. II) published in 1932, criticising Heidegger's " Was ist Metaphysik ". In the latter essay, the eminent existentialist metaphysician had tried to show how metaphysics can be truly defined as the study of non-being. This " non-being " was so vividly " felt " by all who suffer from the basic fear or 'Angst' of annihilation at every

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step of his reasonless existence. Carnap points out that this was an instance of being trapped in the loopholes of language. Strayed by the false belief that there must be entities corresponding to all grammatical subjects of sentences in a language, Heidegger thinks that the word "nothing" as it stands in propositions like *Nothing* is before me now etc. must stand for some mysterious entity, to house which, in the words of Prof. Ayer, the metaphysician invents a special non-empirical world. Such mystry-mongering results, in Carnap's terminology, from a confusion between 'formal' and 'material' mode of speaking.

It is, however, not fair to refute Existentialism by Logical Positivism, because the latter is also, though in a less perilous way, a self-annihilating tendency at least for the ontological aspect of philosophy. In Existentialism, metaphysics has killed logic whereas in Logical Positivism, logic has killed metaphysics. The latter of course is slightly preferable for the greater ineluctibility of logic than metaphysics. Still we shall not follow this linguistically biased way to refute this irrationally biased philosophy.

Our own scheme in this essay would be something like this. First we shall admit that the affective side of Existentialism is very appealing. Secondly, we shall narrow down our scope by choosing a single proposition which it is considered authentic to take as the central tenet of Existentialism. Thirdly, we shall see how Existentialists themselves have attempted to explain what they mean by this central proposition. Forthly, we shall give reasons why *their* explanations have seemed unsatisfactory to the present writer. Next we shall try to understand this proposition in all (of course within our knowledge) possible contexts and show how in none them an existentialist could be justified in asserting what he asserted, either on the ground of self-contradiction or of absurdity. We shall conclude by briefly pointing out the 'moral' and 'human' objections to this theory and asserting on the authority of Wittgenstein that a such a theory cannot at least be *preached*.

(II)

"THAT INDIVIDUAL !" (KIERKEGAARD'S EPITAPH)

The above words of the father of Existentialism strike the keynote of the hyper-subjective irrationalism under consideration and strike it quite feelingly.

Novels like "Nausea" (Sartre), "The Fall" (Camus), 'The Trial' (Kaffka) have adequately described the affective side of this doctrine. An inevitable feeling of absurdity attends our reflections on life and existence at a certain depth. Ultimate questions like "where am I ? who am I, who is it that has lured me into this world and how does he leave me there ? Why am I compelled to take part in this big enterprise they call reality ?" which seem to be a bit theologically overtoned echo of Pascal's more theoretical realisations "I am frightened and am astonished at being here rather than there, for there is no reason why here rather than there, why now rather than then, who put me here ? By whose order and direction have this place and time been allotted to me ?" or a more epigrammatically embellished form of the same in Camus "There are always reasons for murdering a man. On the contrary it is impossible to justify his living. That is why crime always finds lawyers and innocence only rarely"—all these beautifully represent what can be enjoyed as a fresh way to be melancholy, as a new channel for our morose reflections. The Sartrean pessimism or fatalism by its show of inwardness is doubtless a suitable emotional form for us who for the sake of modernism.

> .."do a wilful stillness entertain,
> With purpose to be dress'd in an opinion.
> Of wisdom, gravity, profound conceit;
> As who should say, "I am Sir Oracle,
> And when I ope my lips, let no dog bark."

Indeed, wise men resemble the dull in this, at any rate, that both are equally reticent. The introspective sombre aspect that most of our intellectuals, wear, it seems, is in fact a mark of a dull dissatisfaction—not in the least divine, but quite neurotic in nature. The "Sattvika" feint of Tamas is well known to all oriental ascetics. All orgy of sensuality and earthly enjoyments lead, socially and individually, to such spells of crestfallen introspectiveness. Existentialism appeals to us. We too, often feel tired of logic, nauseated with the all-devouring existence that greasily sticks to us without any reason. We often go through such bouts of dread before taking some decision—when our groundless absolute freedom feels like a burden on us both sides of an alternation seem equally irrational and yet we are bound to take one course—and we feel the utter contingency of our accidental existence; in awe, fear, wonder and perplexity we are confronted with the whole of existence which, with all its vastness, looms like an enormous void. All these are splendidly paradoxical.

But what sort of *philosophy* (I mean a reasoned system of clear self-critical thought) can you hope to spin out of such purely " tamasika " sentiments ?

(III)

> " ....in....philosophical studies, the difficultues and disagreements are mainly due to a very simple cause : namely to the attempt to answer questions, without first discovering precisely *what* question it is which you desire to answer."—(Moore, *Principia Ethica*, Preface).

In its variety of forms and wealth of disagreements, Existentialism, as propagated in some sense by Kierkeggard, Nietzsche and somehow by Husserl, in a stronger sense by Martin Heideggar, Karl Jaspers, Gabriel Marcel, and ceremonially by Jean Paul Sartre, is a very big thing. It is so unweidey to handle that one who manages to catch hold of its one end misses another and it cannot be discussed, either favourably or unfavourably without the fear of omission and a subsequent regret that the discussion has been one-sided. Still, for the sake of precision we *must* define it before we show its errors. The definition is bound to be arbitrary as " There is no single existentialist position ". No serious existentialist has ever defined it. To support his strange disinclination to talk about what existentialists were actually up to, Sartre put forward many such general excuses as : " It is the nature of an intellectual quest to be undefined. To name it or to define it is to wrap it up and tie the knot." (Existentialism and Marxism)

Yet it was he who soberly asserted that one thing this growing nebula—Existentialism—always whirled round, viz., the belief that *existence is prior to essence*. Theists or atheists, Roman Catholics or Marxists, all existenliatists, must, to be existentialists, believe that existence is prior to essence. This, then, may be *safely* taken to be the essence of existentialism. We have said 'safely', but this is not absolute. For the passage which contains this declaration is not absolutely dependable.[1] Let us, therefore, to be accurate, form a hypothetical or conditional statement. If existentialism means the belief that existence is prior to essence, then it must be false. This then, is what we are to prove.

Before we undertake the actual process of demonstration we must remind ourselves that our job, even if we can carry it out, will be a thankless one. If we divide our readers into two exclusive groups, Existentialists and anti-existentialists, both the parties will find us to have done nothing even if we succeeded in doing that we are out to do. Existentialists will say that we have misfired, that having shown lack of reason in what is openly against reason we have boxed with a shadow. They will snub us just as mysticism scouts its attempted disproof.[2] Anti-existentialists will simply convert the truism "All pseudo-intellectualists now-a-days discuss Existentialism" simpliciter[3]. And we cannot deviate either charge, for we are doubtless guilty of expecting reason from existentialists and of having discussed existentialism for its refutation. Still we may hope that there must be, in reality, at least some neutrals, who like the present writer, had found Existentialism painfully true as an emotional position and will feel a bit relieved to know of its theoretical impossibility.

(IV)

> "Existentialism stands to day at a parting of the ways: it is in the last analysis either to deny or to transcend itself. It denies itself quite simply when it falls to the level of infra-dialectical materialism. It transcends itself when it opens itself out to the experience of the Superhuman, an experience which can hardly be ours in a genuine and lasting way this side of death, but of which the reality is attested by the mystics." Such is the interpretation of Gabriel Marcel.

Heidegger has tried to demonstrate what he means by this priority of existence over essence. When it is said we experience external objects, say a bird, we may first know 'what it is' (its essence) and then be concerned with the question 'whether it is' (its existence). But in the case of self-knowledge this order is reversed. As to our own self-knowledge, we first know that we are and then may try to know of what nature we are. It is not possible to doubt our existence, by knowing our essential nature beforehand, as we can do in the case of 'objects'. Knowing the 'essence'—i.e., 'the nature of a thing considered independently of its existence' (Rune's Dictionary of Philosophy) of a centaur we can enquire about its existence. We can first consider *what* it is and then assert *that it is* or *is not*. But since the very doubting, as Descartes found, presupposes my existence, I cannot doubt my existence, although I may easily deny this or that essence of me and assert another. In thought also taking away the essential attributes of a 'thing' leaves nothing of its existence, but the 'I' can be conceded as existing devoid of all the qualities or characteristics belonging to it. Therefore, existence of *the* I is prior *in the order of knowledge* to its essence.

Incidentally, even if we grant that in the sense of "*known to be*" existence may be permissibly said to *be* prior to essence, i.e., even if the omission of the words "in the order of knowledge" be excused in the dictum, what about the former reservation, viz., that 'existence is essence' holds only above the 'I'. For it is plain that 'things' which occupy quite a large portion of the total contents of our experience are known in the reverse order, that at least in this case "essence" is prior (i.e., known as prior) to existence. In this respect too the dictum either postulates that our knowledge of things is not knowledge worth the name or it is just a hyperbole which emphasises the fact that in self-knowledge, which is the most important sort of knowledge we may have, existence is known before essence. Either of these two possible ways presupposes a lot, viz., that the knowledge of I alone is knowledge proper or that it is the most important kind of knowledge—the former a strong and the latter a mild form of solipsism. However, leaving this presupposition alone, we question the legitimacy of the *basic* proposition which is that when we know ourselves we first know *that* we exist and then that we are of such and such nature.

Two objections from two radically different view points may be laid *in limine* against this proposition.

From the realistic point of view, as taken by Descartes, self-knowledge gives us two simultaneous certainties, (*a*) that I exist and (*b*) that I think. Descartes' formulation of his dictum rather (perhaps wrongly) suggests that it is the thinking nature of the I (cogito) that is known earlier, or at any rate with greater certainty than its existence (sum). In fact as later analysis reveals, in Descartes' self-existence and essence (thought or consciousness) coincide or in other words, it is the thinking that is indubitable more than any existent ego—which perhaps is a step further. " I think " and " I exist " are inextricably interwoven. To assert the existence of the self and simultaneously to feign uncertainty about thinking as its essence would be as senseless as Descartes deemed it to be. For, it is in the same sense and on the same ground that ' I exist ' is indubitable as " I think " is.

From the diametrically opposite Reductionist (or Behaviourist) standpoint, the ' self ' cannot be known at all in any ' special ' way. The mystical preference of the private ' I ' to the public not-self is nothing but obfuscation. The ' Privileged access ' theory of self-knowledge as a generically different type of knowledge contrasted with the knowledge of outside objects or other-selves is, as Gilbert Ryle says with " Deliberate abusiveness " a product of the Cartesian myth of " Ghost-in-the Machine " (i.e., a man as a mind-body whole). Gilbert Ryle's historical work in the philosophy of Mind is a bold attempt to show that the solipsist supposition that self as merely thinking and doing nothing else, (not to speak of the self as merely existing—and not even thinking) can be known is a fantastic category-confusion. Selves can be known, but in the same fashion as other objects which, according to Heidegger himself, are known in the first essence and then existence order. Thus we see that either the existence and essence of the self can be known together or separately they cannot be known at all. By now we have reduced our enquiry to this simple question : In what sense is the existence of the self prior to its essence ?

Sartre says that " Man first is and only afterwards is he this or that. This is possibly an illustration of the general dictum " Existence is prior to essence ", and an authentic one no doubt.

We may then ask : what is the nature of this priority affirmed in the sentence " Man *first* is and *then* is this or that " bearing of course in mind two things

(*a*) that ' Man ' here stands for the ' self ' of the person uttering the sentence.

(*b*) that even if this is true, to prove that existence as such is prior to essence, we are yet to prove that this ' Man ' or ' self ' is the only thing, or in a loose sense, the only important thing of which existence or essence can be predicated.

The priority may be (*a*) temporal (*b*) epistemological (*c*) logical or (*d*) metaphysical. If it is neither temporal nor epistemological, and neither logical nor metaphysical, then it is nothing. We do not consider here psychological priority which, besides epistemological priority, means, so far as I can see, a sentimental priority, namely that some people are more *impressed*, should I say " obsessed " which is actually the case with the existentialists, by the existence than the essence of ourselves. This may be true and yet " Existence is prior to essence " philosophically false.

(*a*) Heidegger's illustration (of our knowledge of a bird and of ourselves) made it clear that by asserting that existence is prior to essence, he meant that existence is *known before* essence. But Sartre has simply said that " Man first is....etc.", which leaves the possibility open that he might have learnt that in man, or the individual self, existence, in fact, comes or originates earlier than essence, that man is temporarly first existence, then of this or that essential nature. What he means is, then that man, before being a man, is a mere nameless natureless existent. But this is absurd, like the incredible Naiyāyika hypothesis that at the moment of creation a substance is without attributes or essences, a mere existent. For, it is inconceivable that a thing can exist without an essence, even for a microscopic fraction of a second. Everywhere, in our experience, existence is found enmeshed with essence. Again, by definition, essence is that without which that which has the essence cannot be what it is. for essence is, as Locke defined it, what makes a thing what it is. Even " existence " in a very broad sense forms a most general, and, therefore, ordinarily overlooked, part of the essence of a thing if it is necessarily existent. Of course, existentialists also assert that existence is ever contingent and has no cause or necessity. However, essenceless existence cannot exhypothesi be a real stage in the biography of an individual.

In fact "individuality" which, in its richness of content, uniqueness of being, and inexhaustibility by concepts, is so celebrated among the existentialists is nothing but the "essence" of the individual. As a mere nameless existent, the individual is *not* distinguishable from any other object. Both the external object and the subjective self exist, and in existence they are identical. To admit that even for a moment the individual exists without its essence (individuality) is to give it at least a momentary identity with the not-self or being in—itself (*ensoi*). And this would be catestrophic for the existentialists who stress the generic difference between *ensoi* and *poursoi*.

(*b*) That the above proposition cannot be epistemologically defended has been shown above. We have already seen that the self cannot be *known* to exist before it is *known* to have this or that essence.

Here we may anticipate the objection that as *nirvikalpaka* knowledge (which resembles Hobbouse's simple apprehension) of the Naiyāyakas is presupposed by all *savikalpaka* or judgmental knowledge, the knowledge of 'I' as merely existing is presupposed by, though not *felt to be had before* the knowledge of 'I' as also of this or that essence. This undiscovered noetic presupposition of existence by essence brings us to the third possibility of logical priority.

(*c*) Essence may, as a category, presuppose existence. The predicate 'exists' may be of such nature that it must first be applied to a subject of a proposition (here, especially 'I') in order that other "essential" predicates like 'rational', 'conscious', 'animal' etc., can be applied to it. Like all other logical relations, this priority then would be concerned with the forms of propositions. And indeed the proposition 'Man is mortal' or 'I am thinking' gives an impression that man first is and is then mortal, that I first am and am then thinking. About this apparent show of priority of existential predicates over essential predicates, Mill's remarks are sufficiently lucid and relevant to our purpose : " It is apt to be supposed that the copula is something more than a mere sign of predication; that it also signifies existence. In the proposition, Socrates is just, it may seem to be implied not only that the quality 'just' can be affirmed of Socrates, but moreover, that Socrates is, that is to say, exists. This, however, only shows that there is an ambiguity in the word 'is'—a word which not only performs the function of the copula in affirmations but has also a meaning of its own in virtue of which it may itself be made the predicate of a proposition. That the employment of it as copula does not necessarily indicate the affirmation of existence appears from such a proposition as this: "A centaur is a fiction of the poets"; where it cannot possibly be implied that a centaur exists, since the proposition itself expressly asserts that the thing has no real existence.

(*d*) Ontologically, existentialists are phenomenologists. According to Sartre, who supplied us the central proposition we attack, there is nothing called 'essence' beyond phenomena. Any essence that is different from or over and above, that Sartre calls a concatenation of apprearances of a thing is not admitted. When they say, therefore, that existence is prior to essence they cannot mean by essence any transcendental essence. Then they must mean that this total of actual and possible appearances (which, a phenomenologist thinks, is the essence of any thing) is ontologically dependent upon existence and that this dependence is one-way, since reciprocal or mutual dependence would not warrant the assertion of ontological priority on one side. That existence *can do* without this " total of actual and possible appearance " (essence) but that this total of actual and possible appearance *cannot do* without existence would, then, be the import of the dictum. This reduces to the realistic dualism that what appears or can appear must be objectively real but what is objectively real may not appear actually or potentially. And this latter, even in the case of 'I', goes against the phenomenological hypothesis which makes a thing identical with its appearance. Because this one-way dependence of appearance on existence would entail that existence can do without actual and possible appearance, that a thing may exist and yet not appear or be capable of appearing. This clearly points to the possibility of noumenal existence and is fatal to existentialism, for the latter is grounded on phenomenalism.

(V)

> " But if the universe were to crush him, man would still be more noble than that which killed him, because he knows that he dies and the advantage which the universe has over him, the universe knows nothing of this. All our dignity then is in thought. By it we must elevate ourselves, and not by space and time which we cannot fill. Let us endeavour, then, to think well, this is the principle, of morality "— So said Pascal.

Apart from these several theoretical objections there are serious moral and emotional charges against Existentialism which make it impossible to support it even as a beneficial or pleasant falsehood. Its pessimistic attitude, its atheistic trend, its personalistic obsession, its demoralising metaphysics, its self-centred individualism, and above all its dehumanising revolt against thought and rationality—the two treasures of mankind—all these are standard non-logical objections to it. Striking ejaculations like " Everything is born without reason, prolongs itself out of weakness and dies by chance ", or " Being is without cause or without necessity " are befitting only a tragic-hero-dialogue, and are not even of any other infra/supra-intellectual value.

Even if, as Sartre has somewhere denied the charge, Existentialism is not pessimistic, it is anti-speculative. It is described sometimes as, together with Marxim an " activistic philosophy ". But this last seems to me to be a self-contradictory concept. The heart of philosophy is reflection. Thoughtless doing or feeling cannot be its motto, however vapid the thought may seem to a section of mankind. All the sickening moroseness that is engendered by reflection is not creditable to any inherent defect of ' reflection ' *per se*, but is in most cases a mental consequence of digestive disorder—not infrequently concomitant to sedentary intellectualism. There is no point in implying that man should cease to think because thinking makes him melancholy. It is not the function of philosophical reflection to make man happy or unhappy. Man reflects for his dignity, and not for his happiness Nevertheless, stunts must have limits. That philosophy can tolerate anything but sentimental flippancy is clearly shown by the gradual fade-away that has been the fate of Existentialism. It is good, no doubt, to realise the futility of theorising and the humility of intellect on the face of gross matter that controls our life here on earth. This gives a cosmic catholicity to man's outlook. The practical and the factual can be upto a certain limit be emphasised over the theoretical and ideal. But beyond this limit such gross fatalism would lead man to intellectual blindness which, for man, is as sad as death. In his inner life, man must know the sovereignty of thought, reason and concepts over things, facts and percepts. He must recognise what is distinctive and glorious in him, what makes him the lord of this Universe and must not feel always helpless on the verge of Death or Time, perplexed at the chaos that is nature, always thinking of particularity and contingency, being deliberately blind to universality and necessity which are also there in nature. Existentialism is immoral because it saps the intellectual ardour which is the most cherished thing in man, in the name of making much of his hitherto-neglected " sentiments" of boredom and all that.

The scanty smatterings of its literature I have had suggest that Existentialism is a characteristically obscure, uncommunicable and clumsy philosophy. And Wittgenstein equips us with the major premise to conclude that it should not be propagated as a doctrine : " What can be said, can be said clearly and what we cannot talk about we must pass over in silence."

Calcutta **Arindam Chakravarty**

NOTES

1. It, in fact, contains such flagrant contradictions as follows. It is said first that " Existentialism is *nothing else than* an attempt to draw all the consequences of a coherent atheistic position ", and yet it is admitted in the same breath that even if God existed, i.e., atheism were false, existentialism would stand. One wonders how a proposition which is *nothing but* a deduction from a premise stands when the premise falls.
2. This, I doubt, whether the existentialists can honestly say. Phrases like " To avoid infinite regress ". are not rare in their works. As a system of philosophy, it must and does actually employ arguments intended to be valid.
3. This, as any student of Logic will find, is clearly fallacious for the given proposition is an A proposition.

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FOUR TYPES OF *A PRIORI*

(A Historico-Critical Study)

The rationalist philosophers agree on the point that reason provides us with the a priori elements and principles of knowledge. Almost all the pre-Kantian rationalists besides Aristotle in the Greek Age believed in some sort of intellectual intuition in which we apprehend a priori truths about things and even some a priori or eternal entities. Science, for them, was deducible from such truths and entities. Kant and post-Kantian rationalists (except Hegel and the Hegelians), again, hold that a priori truths and principles are not intuited. These are held either as constitutive of our objective experience or as regulative or methodological principles which enable us to organize our factual knowledge. Accordingly, the term " a priori " is taken here in a general sense to mean *eternal*, or *universal*, or *necessary*, or *independent of experience*, and the expression " a priori elements " to signify all those elements and principles in knowledge which are eternal, or universal, or necessary and/or which are the preconditions of knowledge or simply those which are the presuppositions of knowledge in some sense or other.

Stuart Hampshire says,

> . . . . the seventeenth century can properly be called, in the history of philosophy, the Age of Reason, because almost all the great philosophers of the period were trying to introduce the rigor of mathematical demonstration into all departments of knowledge, including philosophy itself. The form of philosophical argument in Descartes, Spinoza and Leibniz is largely deductive and a priori; . . . .[1]

Descartes, the pioneer of the school, for example, has tried to draw all his philosophical conclusions from the self-evident ideas seen in *the natural light* of reason. He was convinced that one can solve all sorts of problems either of the natural sciences or of mathematics or of philosophy by this natural light of reason. The criterion of truth, for him, is *clarity and distinctness*. To throw more light on this criterion, we may quote Descartes :

> I term that clear which is present and apparent to an attentive mind, ... But the distinct is that which is so precise and different from all other objects that it contains within itself nothing but what is clear.[2]

Descartes' position will be clearer from the following quotation from W. Windeband's *A History of Philosophy* :

> 'clear' is defined by Descartes as that which is intuitively present and manifest to the mind, *distinct* as that which is entirely clear in itself and precisely determined.[3]

It is evident from the above quotations that Descartes does not take "clarity and distinctness" in the psychological sense. For, a distinct object or a distinct proposition is not revealed even to a mind which is only attentive; it requires the natural light of reason to come to light. Thus the innate ideas which are distinct may be said to be a priori in the sense that these are self-evident truths and are grasped by reason.

Spinoza, who follows Descartes closely, distinguishes between three kinds of knowledge : *imaginatio*, *ratio* and *scientia intuitiva.* He holds that knowledge of the second and third kinds is necessarily true. In his own words :

> Knowledge of the first kind alone is the cause of falsity, knowledge of the second and third orders is necessarily true.[4]

And his idea about the nature of reason will be clear from his own words :

> It is not of the nature of reason to consider things as contingent, but as necessary.[5]

The meaning of the word "necessary" will be clear from the corollary 2 of the same proposition : "It is of the nature of reason to perceive things under a certain form of eternity". What is meant thereby is eternal existence. Descartes' innate ideas also refer to some non-sensuous entities in the sense that innate capacities, viz., the concepts of *thing*, *truth* and *consciousness* possess potential existence. Veitch's notes on "innate ideas" will make Descartes' position clear. He writes :

> By *innate idea*, Descartes meant merely a mental modification which, existing in the mind antecedently to all experience, possesses, however, only a *potential* existence, until, on occasion of experience, it is called forth into *actual* consciousness.[6]

Obviously, these point to some *ontological apriorities*. It may be mentioned here that Descartes' innate ideas as ontological apriorities are examples of mental existents, but he does not confine to that. The existence of 'I' and that of 'God' are held by him as basic ontological apriorities. Ontological apriorities are 'beings' on which the existence of empirical things depend. (We are not going to maintain any distinction between 'being' and 'existence' here). That Spinoza speaks about the ontological apriorities becomes clearer when he says that we should deduce all our ideas from fixed and eternal things which " although they are individual, yet on account of their presence everywhere and their widespread power, will be to us like generalities or kinds of definitions of individual mutable things, and the proximate causes of all things".[7] He says further that we should " never pass over to generalities and abstractions, either in order to conclude anything real from them or to deduce them from anything real; for either of these interrupts the true progress of the intellect. "[8]

But in Leibniz we find a clear distinction between the logical and the existential, in Leibniz's language, between the necessary and the contingent. Necessary statements are established as valid by reference to the principle of contradiction alone[9] while the validity of contingent statements cannot be so established. According to Leibniz necessary statements express " truths of reason " and contingent statements express " truths of fact ". Truths of fact are expressed in statements which contain the notion of existence as their predicate. And the property of existence does not inhere in any substance except God whose essence includes existence. So only one existential proposition stating the existence of God is necessary; all other existential propositions are contingent. To quote Leibniz :

> That God exists, that all right angles are equal to each other, are necessary truths; but it is a contingent truth that I exist, or that there are bodies which show an actual right angle.[10]

The validity of the contingent truths is determined by the principle of sufficient reason which justifies the best possible choice of the Creator. Leibniz says,

> The great foundation of mathematics is the principle of contradiction....And this principle alone suffices for proving all Arithmetic and all Geometry, i.e., all mathematical principles. But in order to proceed from mathematics to natural philosophy another principle is requisite....I mean the principle of sufficient reason.[10]

Leibniz holds that predication consists simply in stating the properties which inhere in a substance. In other words, all the predicates, except existence, according to him, are contained in their respective subjects. Accordingly, the truth of all non-existential (i.e., non-factual) statements can be established by the law of contradiction alone. For, it is simply by an analysis of the subject and predicate concepts that we can determine their truth. We require only to see that the predicate concept is not incompatible with the subject concept. The following extract from *The Philosophical Works of Leibniz* (Trans., G. M. Duncan) will make Leibniz's position clear :

> Truths of reasoning are necessary and their opposite is impossible; truths of fact are contingent and their opposite is possible. When a truth is necessary, its reason can be found by analysis, resolving it into simpler ideas and truths, until we come to those that are primary.... Primary principles....cannot be proved, and indeed have no need of proof; and these are identical enunciations, whose opposite involves an express contradiction.[11]

For Leibniz, necessary elements are logical elements; these are not *entities*, i.e., ontological elements. So he is concerned with the *logical apriorities* when he speaks of innate ideas. Innate ideas, according to him, do not state the *existence* of any entity. These are general truths about the possible entities. His idea of the universe as consisting of substances called monads is an outcome of his logical doctrine of ultimate subjects. Monads come into existence by an act of God's creation. That Leibniz is concerned with the logical apriorities becomes further clear from the fact that the problem as to whether we have innate ideas is treated by him as a logical issue while that is treated by Locke as an empirical issue. Locke tries to settle the problem by introspection and research while Leibniz tries to see whether all concepts can satisfactorily be reduced to or analyzed into concepts which are given in experience. Leibniz holds that there are necessary truths found in pure mathematics "that proof of which does not depend on examples, nor consequently on the testimony of the senses, although without the senses it would never have occurred to us to think of them."[12] He further admits that "Logic also, together with metaphysics and ethics....are full of such truths; and consequently their proof can only come from internal principles, which are called innate."[12]

Leibniz admits of two kinds of primitive truths : primitive truths of reason and those of fact. They are primitive because they are intuitively known—"all primitive truths, of reason or of fact, have this in common, that they cannot be proved by anything more certain."[13] It should be mentioned here that the primitive truths of fact are *not necessary* though they are the most *certain* of all truths of fact. Leibniz says, "Primitive truths of fact.... are the immediate internal experiences of an immediateness of feeling."[13] He says that it is only as a primitive truth of fact that "the first truth of the Cartesians, or of St. Augustine, *I think therefore I am*, that is, *I am a thing that thinks*, holds good."[13] It is Leibniz's belief that the world, created by the benevolent God, must exhibit a few universal principles of order. These are a priori or innate truths. The law of sufficient reason, the principles of identity of indiscrenibles, the principle of pre-established harmony are the examples of such truths. These truths guide us in framing hypotheses to explain phenomena. These help us to predict some truths about some possible events.

So far we have found two kinds of a priorities, viz., *the ontological* and *the logical*. In Kant we find a third kind of apriority. We may call it *the epistemological apriority*, because, according to Kant, the a priori elements of this kind are the preconditions of developed experience in which we know objects. Kant holds that the sense-manifold is the only given and that objective knowledge consists in the synthesis of the given where we supplement sensation by processes of memory, imagination and understanding. By regressive analysis of our knowledge of objects, Kant discovers some rules or concepts in accordance with which every synthesis proceeds. These are, according to Kant, "concepts of an object in general" in the sense that they are of universal application being predicable of whatever else is to be considered a part of the objective world. These rules or concepts are a priori anticipations of some order in the objective world. These ideas are called a priori first because, they are held without regard to the nature of the given and applied to whatever is given and, secondly, because they cannot conceivably be derived from immediate experience. Kant calls these ideas categories which represent the contribution of the pure understanding to knowledge.

It is important to note here that Kant's categories are not to be conceived as independently existing things or relations. They are not like Forms or Ideas of Plato. Nor do they denote things or relations as Aristotole's categories do. Kant's categories, are, rather, concepts of the ultimate ways in which we give unity to sense-experience. They are concepts of the processes of synthesis. They are not entities. Unless they are applied to the given, they are empty forms. And as processes of synthesis they are unintelligible until something is presented for synthesis. The categories of substance and causality, for example, were treated as concepts of things and relations respectively by the pre-Kantian rationalists. For them, they were objects of intellectual intuition. But, for Kant these categories operate in the understanding and interpretation of the given. Substance, for him, is the idea of permanence. This idea of permanence plays its part in the understanding of change, the all-important characteristic of time. Again, without the idea of causality we cannot distinguish between subjective and objective succession. So we see that Kant's categories are necessary pre-conditions or pre-suppositions of our knowledge of object, and in this sense they are epistemological apriorities.

C. I. Lewis propounds apriorities of a different sort in his book *Mind and the World Order*—apriorities which resemble the Kantian type of apriorities in two respects : (i) mental in origin and, as he thinks, (ii) categorieal in nature. As regards the source of apriorities Lewis himself writes,

> Whatever belongs to the mind itself is assured in advance. This is the one point upon which all conceptions which recognize an apriori have agreed..[14]

That " mind " is taken here in the sense of " understanding " is clear from the fact that he has recognised interpretation to be the most significant function of the mind. He says, " There is no knowledge without interpretation".[15] and that interpretation 'represents an activity of the mind.' He says, "The a priori has its origin in an act of mind.... "[16] and that it is a peculiar possession of the mind because it bears the stamp of mind's creation. According to him,

> This point of the relation of the a priori to the mind, is really of prime importance, for upon it depends that assurance, superior to the assurance we can have of generalizations from experience, that nothing future experience can reveal will falsify it.[17]

This last assertion suggests the nature of the a priori. It is of the categorial type :

> That is a priori which we can maintain in the face of all experience *no matter what.*[18]

Again he says,

> That only can be a priori which is true *no matter what.*[19]

Lewis says that the a priori represents an attitude of the mind in some sense freely taken, that is, without anticipating the given.

In his own words :

> What is anticipated is not the given but our attitude toward it; it formulates an uncompelled initiative of mind, our categorial ways of acting.[20]

'Uncompelled', in the sense that it is not dependent on experience in any way. "And the a priori is independent of experience.... precisely because it prescribes *nothing* to the content of experience".[21] What does the a priori do then ? Where lies its significance ? Lewis replies,

> Truth which is a priori anticipates the character of the *real*; otherwise, it would possess no significance whatever.[22]

But what is real if not the given as such ? Lewis says that the real is the given categorially interpreted. The necessity of the a priori, Lewis contends, lies in its character as legislative act. He writes,

> In determining its own interpretations—and only so—the mind legislates for reality, no matter what future experience may bring.[23]

Does the mind's legislative act preclude any imaginable or unimaginable content of experience in the future ? Lewis answers in the negative and says,

> A categorial principle is a sort of *purposive attitude* taken in the interests of undertstanding and intelligibility with which we confront the given.[24]

He says that such principles, which are the expressions of mind's fundamental attitudes towards the given, preclude only our interpreting the future experience in a fashion contrary to our pre-determined attitude or bent. And to the question how we can be assured positively that our minds will not alter in these fundamental attitudes, he replies that we cannot have any such final assurrance. He says that the present theory " is compatible with the supposition that *categorial* modes of interpretation may be *subject to gradual transition and even to fairly abrupt alteration* ".[25] He simply demands that any alteration or transition will have some rationale :

> To be sure, the continuity of fundamental attitudes and purposes is the core of personality; the supposition that, without any rationale, these may become altered, is simply the supposition that a new and abnormal personality may replace our present one. This is admittedly possible, but it is not a contingency against which the theory of knowledge is supposed to provide.[26]

As regards this last point Lewis's theory differs from thar of Kant. Kant's theory is so rigid that it permits no transitiot and no alteration. Lewis's theory differs from Kant's in anothen important respect. It denies that the a priori validity of our categorial interpretation requires also a priori modes of our receptivity or intuition. But it appears that this theory, although it is different in important respects from that of Kant, is nearer to it more than any other theory of the a priori in being epistemological. Indeed, Lewis himself, it seems, does not draw any distinction between the logical and the epistemological a priori.

A fourth class of apriorities is emphasised by some of the twentieth century philosophers. These, as they call them, are methodological postulates. According to them, " a priori principles are methodologic or regulative principles which enable us to organize our factual knowledge ".[27] Not only that, they are also 'expressive of the fundamental nature of things'.[28] Thus, Cohen shows with examples, that " the rules of logic and pure mathematics may be viewed not only as principles of inference applicable to all systems but also as descriptive of certain abstract invariant relations which constitute an objective order characcteristic of any subject-matter ".[29]

Modern logico-critical philosophers hold that there are no absolute a priori concepts or principles in the sense that they are necessary pre-suppositions of our knowledge of object in general. According to them, a priori concepts and principles are 'either formal or relative to systems of possible knowledge'.[29] Formal logic and pure mathematics provide us with formal apriorities while logic of sciences and applied mathematics supply us apriorities which are relative to respective systems. They deny absolute apriorities " because an absolute totality of all existence is not a determinate object of discourse ".[29] We propose an examination of this position in our section on the nature of the a priori, shortly to follow.

Meanwhile we may discuss a very important point, viz., whether a priori propositions of this sort are mere conventions or not. Thinkers like Poincare hold that they are mere conventions. According to Poincare, a priori positions are really firm resolutions to carry on the scientific game according to certain rules or stipulations. But Cohen disagrees with Poincare. He holds that axioms which guide scientific investigations are genuine assertions about objective existence. Cohen says that among the several assumptions we choose 'those that are productive of consequences consistent with observable fact' and that this preference cannot be on the sole ground of simplicity. He says,

> The simplicity which science seeks is not something divorcep from the facts explained. Scientific simplicity is the characteristic of hypotheses which seize upon factors manifesting themselves in widely diverse phenomena.[30]

Then he concludes by saying,

> ....if the assumption that physical nature is a causal system leads us to find connections between things, it is because the connections are there to be found and not merely because we are resolved to find them.[30]

As an actual example he cites the case of the Bureau of Standards at Washington and says that we pick out a certain platinum bar located there and say that so long as it is at the same temperature and pressure it has the same length, not without some objective ground, but on the ground that it enables us to anticipate actual uniformities in nature.

The nature and the classification of the a priori

We have distinguished between *four classes of apriorities.* We have said that the ontological apriorities are entitative pre-conditions of some existents and of their knowledge; the epistemological apriorities are pre-conditions of our knowledge of objects; the methodological apriorities are postulates, which the scientists have to pre-suppose,in order to systematize the materials of their respective fields; and the logical apriorities are means to spell out *purely* formal relations with empty concepts. But it may be argued that the classifications drawn here of the apriorities are arbitrary. They are so, one may contend, first because the term " ontological a priori " has got no meaning and, secondly, because the logical, the epistemological and the methodologic apriorities are not different as there is no difference between logic, epistemology and methodology. In answer, however, to all these we say that the term " a priori " is used in two braod senses : first, whatever is prior to and independent of sense-experience is a priori, and secondly, whatever is necessary is a priori. Now, generally logical priority and psychological priority are taken to be the only two possible types of priority; but this is not actually the case. Even the disjunction ' either logical or psychological ' is based on a supposed ontology of time; psychological priority is temporal while logical priority is non-temporal. But in philosophical discourse we find much importance is given to purely ontological priority also. What is ontologically prior may be called entitative precondition of our empirical knowledge. Plato's Ideas, Descartes' God and self, Spinoza's Substance and Leibniz's monads are beings of a higher level on which the being (or existence) of empirical entities depend. These entitative pre-conditions may be called *ontological apriorities*, and, we think, it is hard to deny that there is, in philosophical literature, serious study of apriorities of this sort. The question as to whether such apriorities can be maintained consistently in a realistic theory should not be allowed to obscure this historical fact.

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NOTES

1. S. Hampshire, ed., *The Age of Reason*, U. S. A., 1958, p. 17 (Introduction)

2. Haldane and Ross, Trans. and ed., *The Philosophical Works of Descartes*, U. S. A., 1931. Vol. I. p. 237.

3. W. Windelband, *op., cit.*, p. 392.

4. Spinoza, *op., cit.*, Part II. Prop. XLI

5. Spinoza, *op. cit.*, Part II. Prop. XLIV

6. Descartes, *A Discourse on Method*, London, 1957, p. 250 (Notes)

7. S. Hampshire, *op. cit.*, p. 141; quoted from the extracts of Spinoza's *The Treatise on the Correction of the Understanding.*

8. S. Hamphsire, *op. cit.*, p. 140; quoted from the extracts of Spinoza's *The Treatise on the Correction of the Understanding.*

9. And about the principle of contradiction Leibniz writes, " The first of the truths of reason is the principle of contradiction, or, what comes to the same thing, that of identity " (B. Russell *op. cit.*, p. 207)

10. Russell, *op. cit.*, p. 208

11. Russell, *op. cit.*, pp. 207–208

12. S. Hampshire, *op. cit.*, p. 173; extracrs from Leibniz's *New Essays Concerning Human Uunderstanding*

13. S. Hampshire, *op. cit.*, p. 176; extracts from Leibniz's *New Essays Concerning Human Understauding*

14. C. I. Lewis, *Mind and the World Order*. (Dover edition) U. S. A. 1956, pp. 212–213.

15. *Ibid.*, p. 195

16. *Ibid.*, p. 213
17. *Ibid.*, p. 212
18. *Ibid.*, p. 224
19. *Ibid.*, p. 197
20. *Ibid.*
21. *Ibid.*
22. *Ibid.*
23. *Ibid*,
24. *Ibid.* p. 228; italics ours.
25. *Ibid.* italics ours.
26. *Ibid* , pp. 228–229
27. Cohen, *op. cit.*, p. 142
28. Cohen, *op. cit.*, p. 143
29. Cohen, *ap. cit.*, p. 145
30. Cohen, *op. cit.*, p. 142

OF FAMILY RESEMBLANCES AND AESTHETIC DISCOURSE

The ensuing analysis examines the view that in a descriptive sense it is impossible to specify the necessary and sufficient conditions for saying that something is a work of art. This thesis, as expounded by Weitz, Kennick, and others, has recently encountered criticism which misses the substance of the way it relies upon aspects of Wittgenstein's later thought. A review of the literature ever since Weitz' pioneering work suggests a need for surveying the manner by which Weitz adopts Wittgenstein's insights for his own designs. Hopefully what can be shown is that the view under investigation is far from acceptable, since the basic philosophical pre-suppositions upon which it is founded, that is, family resemblances and the open concept, neither necessarily nor provisionally suggest the conclusions which Weitz' supporters and critics alike find unavoidable. For the Wittgensteinian influence which is the foundation of this theory is itself remarkably unclear, making its unreflecting adaptation yield the production of less than tenable conclusions. Even in most recent discussions dealing with the definition of art, the nature and significance of Wittgenstein's thought upon Weitz is accepted as is, without careful consideration of its very tenability.[1]

The analysis is presented in three sections. First, an exposition of Weitz' position and the effectiveness of Mandlebaum's criticism of it. Secondly, an examination of Weitz' position from the view point of the notion of family resemblance, and whether the latter is as clear a notion as some suppose. Finally, a view of aesthetic discourse which looks beyond Weitz' attempt by seeing such discourse as a phenomenon immanent in the very *practice* of a particular language, which cannot be meaningfully spoken of in terms of family resemblances or apart from the particular language it manifests itself in.

I

Weitz proceeds on the observation that though works of art have certain specifiable characteristics in common, there is no single characteristic or set of characteristics which all works of art possess. Hence one can speak of certain resemblances between works of art, but not about so-called " essential " characteristics *all* such objects have. The similarities between instances of art are seen as family resemblances, referred to by Wittgenstein when attempting to illustrate the non-essentialistic nature of ordinary discourse. At this juncture one must note that the idea of family resemblance is considered by Wittgenstein in contexts which involve the use of language. Weitz, however, often expounds his position by weaving in and out of contexts which involve either art objects *themselves*, or the *speaking about* such objects.[2] Hence where Weitz speaks of family resemblances, one must keep in mind that he is considering how such resemblances are manifested in both contexts. Thus just as various art objects may exhibit certain similar characteristics, without their all sharing any one single characteristic, so also various instances of talk about art exhibit family resemblances as well. However, in Weitz' view it is futile to search for essential properties for all such objects or modes of dicourse, as aestheticians since Aristotle have attempted.[3]

The persistent difficulty is seen by Weitz as being both epistemological and logical. For he is interested in exploring the grammar of the word "art", as it is influenced directly by the variety of objects which are recognized or referred to when the word is employed. Aestheticians have failed to realize that the sense of discourse involving art is never predictable, in that the "expansive " and " adventurous " nature of art itself defies an essentialistic definition, and points to the inescapable " wide-open texture " of art as a concept. Thus the logic or " grammar " of the word "art", or of aesthetic discourse generally, cannot be something which can be formalized for all possible cases. Rather, one can only notice the resemblances between different cases in which the word " art " is being used.[4]

Consequently, when it comes to deciding whether or not something new is to be called art, one must either extend or totally alter the prevalent meaning (use) of the word. This is why when aestheticians are called upon to defend their definition and uses of the term, they cannot appeal to clear and direct evidence to justify their pervasive claims. For there will always be the possibility of including some new and different thing to all that which has been covered by the term before. Seeing that there always is an exception, their theories of art's meaning, or what art refers to, can never be open to objective proof. On the other hand, where these theories are interpreted to be a priori true (in an analytical sense), conflict invariably arises as to whether such theories conform with the everyday use of discourse. At most Weitz would view this approach to theory construction in aesthetics as the setting forth of arbitrary definitions of what art is supposed to encompass. Generally, theories of art stem from theoriests seeking to ansewer the question "What is art ?" instead of trying to answer the more realistic question "How is the word "art" used ?". The latter involves studying the workings of discourse with respect to the word's use. The former has been taken as implying (however erroneously) a single answer, or one which is essentialistic in nature.[5]

In understanding Weitz' view one must see it as distinct from issues involving the nature of aesthetic qualities, e.g., whether they are affective or directive. For Weitz does not deal with the phenomenology of aesthetics, but with the logic of aesthetic discourse. Keeping in mind as well that Weitz is developing his position by applying Wittgenstein's insights into the workings of language, one must consider what he has to say on a linguistic level of analysis.[6] Thus the issue one is faced with when considering the adequacy of Weitz' view is whether or not his conception of aesthetic discourse is in fact correct. For he does not concentrate specifically upon the problem of how to conceive of aesthetic objects as such, but how they are to be spoken about. Even in contexts where he considers objects of art in themselves, he views them as given. Clearly, the questions which supposedly concerned Wittgenstein in *Lectures and Conversations* were matters which did not have a direct influence upon the presentation of Weitz' view point. Rather, he is more directly influenced by the Wittgenstein of the *Philosophical Investigations*, who views language as a collection of games one plays with words. For Weitz then, aesthetic discourse is a particular kind of language game, whose ruls are uniquely flexible, and open to an apparently endless variety of transformations.

Weitz' thesis of course has received amplification by a number of writers. To mention but a few, W. E. Kennick observes that aestheticians in doing art criticism have erroneously assumed that they must apply or work with universal standards of analysis. Their assumption is that art is basically a monolithic subject for analysis, wherein its variety does not come to influence the standards of criticism one brings to it.[7] Again, Weitz' argumentation is seen as underlying Beryl Lake's criticism of Croce's theory of art. Lake observes that Croce must assume, in defining art as " intuitive knowledge ", that his definition is a priori true (in an analytical sense), since Croce cannot empirically illustrate what he means by intuitive knowledge. On the other hand, if it is taken to be an a priori statement, it surely does not reflect how the term is widely used. For other aestheticians use the term differently, making the latter an arbitrary definition at best. Similarly, W. B. Gallie employs Weitz' line of attack to criticize essentialists for pressupposing that in order to define art, they must know what it is *in essence*. Gallie prefers a much more experimental approach to the problem, so as to determine how art manifests itself in different ways, and then to proceed to more rigorously define art as a concept.[8]

Alternatively opposition to Weitz' position centers mainly on how it is based upon Weittgenstein's notion of family resemblance. Mandlebaum, borrowing from Helen Harvey, argues that to say works of art or uses of the term " art " exhibit family resemblances, but that there is no single characteristic or set of characteristics which all works of art have in common, really does not clarify the situation. For the similarities which are at issue here do not in themselves manifest *genetic* resemblances. Surely there can be accidental resemblances between things which have absolutely no genuine bond between them, and hence they cannot be said to have a " family " resemblance. Mandlebaum argues the sense of saying that art objects, or different instances of aesthetic discourse, exhibit a family resemblance, and that for this reason one uses the word " art " to refer to them. One does not know which way to go with the idea of family resemblance in this situation. Does it imply inherent relationships or accidental appearances ? Weitz' failure to face this question gives him no right to speak in terms of a " logic " for the word " art ". If one is dealing with genetic relationships here, where are the criteria for determining that there are genetic similarities to consider ?[9]

Mandlebaum, however, is all too eager to claim that when Wittgenstein spoke of family resemblances he meant genetic relationships, in a biological sense. Scrutiny reveals that this is hardly defensible. When speaking of resemblances Wittgenstein repeatedly askes us to look for and "see" these resemblances in the very use of language. This is not a matter of specifying genetic linkage, but of simply noticing the function of discourse. On the resemblances between language games, Wittgenstein makes the following observation :[10]

> "Don't say : 'there must be something common, or they would not be called 'games'..but *look* and *see* whether there is anything common to *all*, but similarities, relationships, and a whole series of them at that. To repeat : don't think, but look !...."

Quite clearly, in his criticism Mandlebaum seems to be concentrating only upon similarities manifested in family resemblances, to the point of interpreting these similarities as genetic identities, and thus misconstruing Wittgenstein. His emphasis upon how they must somehow reflect a family tie amongst various exemplars of games, suggests that Mandlebaum views these resemblances as designating essentialistic properties. This they cannot do. For by saying that family resemblance involves the exhibition of similarities, etc.- Wittgenstein does not mean to say that because of this, things exhibiting a family resemblance to each other cannot be totally unlike each other in many other ways. Such differences are also part of all that is involved in the notion of family resemblance. Wittgenstein's very directive above for *not* thinking but rather looking for these resemblances, indicates that one should not approach them with any preconception concerning their inherent nature (e.g. genetic linkage), but merely to observe *that* they are present.

On the other hand, Mandlebaum's interpretation of resemblances misses an essential point of development in Wittgenstein's thought, namely that the latter has moved away from an essentialistic conception of language as exposited in the *Tractatus*. In fact the very notion of noticing a resemblance between various language games is precipitated by Wittgenstein's recoiling from his earlier conception of ordinary discourse as a structure of atomic propositions, whose logical nature constituted the essence of such discourse.[11] How incongruous is it then to argue that family resemblances must in some way reflect genetic linkages ? Most recently, W. G. Bywater has emphasized the fact that Weitz and Kennick adopt Wittgenstein's notion of family resemblance since they, like Wittgenstein, are reacting to closed systems, which in their case are the a priori theories in aesthetics.[12]

Mandlebaum's second main argument against Weitz seems equally inadequate. The former argues that Weitz has not provided any evidence by which to demonstrate how the formal requirements necessary for arriving at any theory are *logically incompatible* with the concomitant requirement that however conceived, art objects must be said to exhibit an inherent novelty and creativity.[13] Here it is hard to see what sort of evidence would satisfy Mandlebaum on this point, other than what Weitz and others have already pointed to. For if he is challenging the view that aesthetic expression necessarily of itself alters any established conception of art, then Mandlebaum has overlooked both the *fact* of novelty and creativity in such expressions, and one's manner of talking about it. Basically, supporters of Weitz' view rely upon the evidence that aesthetic expression invariably involves controversy prior to recognition (which is usually a matter of saying whether some particular object can fit into some accepted view of art), and artists themselves seem to hold as a primary objective an intentional departure from traditional modes of expression. Hence, on an empirical level, Weitz argues that works of art do not seem to follow a pre-establsihed path, which will predetermine how these objects will manifest themselves. Consequently, this spontaneous nature of art is reflected in the way one comes to speak about it. For example, one finds that manifestations of art engender the use of descriptive terms like " novel ", " revolutionary ", "creative", etc. which are antonyms of terms connected with the attempt to define, e.g. " determine ", " establish ", " circumscribe ", etc.[14] Essentially, Weitz is saying that defining is an activity which by its very requirements cannot formalize the ever-changing subject matter of art. Apart from pointing to the very puzzling fact of trying to define art, it is difficult to fathom what Mandlebaum would accept as proof for the impasse Weitz has recognized. Since

Mandlebaum does not really question the way Weitz sets up the problem, the logical impossibility the latter points out seems unavoidable.

II

Thus Weitz' thesis is not reduced to paralytic inaction by the thrust of Mandlebaum's argumentation. However, Weitz is vulnerable on some of the points the former concentrates upon, though for significantly different reasons. In reviewing Weitz' position it is convenient to consider it from different vantage points. First, it is fruitful to consider how he treats aethetic objects in relation to games. Secondly, the acceptability of his conception of aesthetic discourse is open to dispute, because of certain deficiencies in Wittgenstein's own conception of family resemblance. Thirdly, a theme permeating the whole of Weitz' position—namely that one can perceive how the variety manifested in works of art themselves influences the diversity in talk about aesthetic objects, leaves a great deal unexplained. Perhaps this latter point in itself provides most dramatic evidence for the shortcomings of Weitz' view.

First, however, it is appropriate to consider how Weitz employs the notion of games so as to call attention to the fact that art objects and aesthetic discourse seem to reflect the same traits exhibited by games. For such an investigation touches upon Weitz' fundamental conception of aesthetic objects. Interestingly, Weitz observes that one comes to see that an activity is like some familiar one called a " game ", yet one also realizes that it is apparently impossible to unequivocally define what games are. Similarly, one comes to see how a work is like some other creation, which is recognized as " art ", but one also realizes that it is impossible to arrive at a definition of art. Hence there are two points of similarity between games and art, which are reflected in discourse concerning them. On the one hand, games and art each constitute collections of things which exemplify family resemblances within each collection. On the other hand, it seems apparently impossible to define what kinds of things should constitute these collections. In view of this, Weitz argues in a way which strongly suggests that whatever Wittgenstein had to say about games and their various resemblances can be freely applied to discourse about art.[15]

Significantly, Wittgenstein himself did not make definite the above crucial association between games and art. Perhaps he realized basic differences between these two areas. Focussing upon these differences reveals the really fragile connection between these two thinkers. For instance, essentially, games are activities, which require that one or more persons *do* something. Art, on the other hand, deals largely with objects, specifiable entities considered in terms of the spatial temporal characteristics they exhibit. Moreover, the activity which a game involves, that is the participation or the playing, *is* the game. However, the activity which is involved by art, insofar as say the appraising of such objects is concerned, is surely something after the fact of having the object. Nor can it be said that the making of such objects is the activity to which the word " art " refers to, since the exact way of creating such objects is often unknown to the beholder. Even in the cases of poems and novels, the reader is presenting to himself through his own reading of the material the object, that is, the theme or the story the author endeavors to convey through his writing. It may be objected that symphonies, plays, etc. all involve performance, and this is the activity which art refers to. Such argumentation is equally untenable, however. For in cases requiring performance by actors, etc. one is really concerned with the *effect* of what they are doing, that is, the space-time event beheld by the audience. It is not the acting as a personal inner feeling within the actor which is observable here, but the projected appearance of the acting as an externalized spatial event. The latter again is an object in the sense that it is understood and criticized in relation to how its various facets intergrate over a span of time and space to form a consistent objective whole. Hence the observation that games refer to activities, but art apparently exclusively deals with objects, is a point which does not distort the way in which this distinction seems to underly ordinary discourse about such matters.

It may be pressed that art objects also involve activities, insofar as they intimately involve the perceptual acts of seeing, hearing, etc. which come to constitute or make possible the aesthetic experience. This, however, is hardly persuasive since it calls attention to the most fundamental pre-requisites of all experience, and thus does not inforce any thing but the basic fact that one must have a reasonably conscious mind in order for there to be *any* awareness. The latter of itself does not justify the conclusion that conceptually art is somehow like games. Even where one was to put forth the view that aesthetic qualities are affective, and thus become manifest by the interplay of sense stimulation and perceptual activity, one still cannot claim that art and games are thus on an equal par, both involving activity. For the affective qualities result from an inner and therefore subjective reaction, whereas the activity a game involves is the public and therefore objective participation of one or more individuals. Hence though it can be said in a very general sense that some sort of activity is involved at particular stages in both cases, it is still not the same sort of activity. Furthermore, the so–called affective qualities which come to constitute aesthetic experience are still qualities *of* something, however, that something or object is completely manifested to the perceiver. Hence it appears that one cannot escape referring to art as some thing, though constructed of interrelated aesthetic qualities, whereas games *are* activities.

If the above can be accepted as a substantial basis for distinguishing between games and art, then a second major divergence between these two areas emerges, for games, as activities, invariably seem to involve rule-directed behaviour, whereas this is not the case with objects of art. However simple a game may be, the person (s) participating must adhere to some pre-established guidelines so as to achieve the goal, win, etc. Indeed, the way in which one determines whether or not an activity should be recognized as a game of some kind is to see whether or not it conforms to some rules of action, however, simple or complex they may be. In short, the determination of whether or not a rule is being followed becomes an important criterion for saying if an activity is or is not a game. There is no rule, however, which when followed or violated allows one to say that such and such is or is not a work of art. Even in cases where a critic speaks of the " correctness " in a certain style of say architecture or painting, one must not interpret such statements as dealing with rules or normative standards for the generation of art. As F. J. Coleman recently pointed out, considerations dealing with the correctness of a certain style invariably involve determining whether or not a certain aspect of an artistic creation properly relates to the whole work in a certain way.[16] However, this is not a matter concerning a rule for creating art, but involves the homogeneity of a particular work in relation to some established way of making such objects. Correctness of style is then a notion which comes into play where one endeavors to *recreate* art in some way, and thus involves a kind of indirect reference to already existent aethetic objects. Hence, the idea of the rule directed activity which animates games, as contrasted to the absence of such controlled activity in the case of art objects, appears to hold up to careful scrutiny.

Moreover, the differences between games and art are reflected in the reasons one has for their respective definitions. Significantly, one expects that a definition for games should enable one to identify such activity as uniquely different from other kinds of activity, as say surgery or farming. Furthermore, it is expected that, however it turns out, a definition of games should enable one to distinguish such activity from random or haphazard activity.[17] The definition of games then provides a means of making a selective and accurate identification. In defining art, however, the purpose of the definition is not only to identify the object as of a particular sort, but also to point out that the object is valued, which inturn becomes a standard or criterion by which to compare other similar objects. For whether it is a justified practice or not, objects of art once recognized as such acquire an honorific status, which projects them as in some sense exemplars of what art *should* be.[18] Yet, though an activity is defined as a game, that particular game does not necessarily itself become a model by which to identify other games. Hence, there is room for saying that definition for art is more demanding, insofar as it should also be able to explain why the object is somehow special. This added requirement is not evident in the case of a definition for games.

In view of the above, it is highly tenuous to argue that art, as considered in ordinary discourse, is like or similar to games. Yet Weitz does proceed on the assumption that both exhibit a similarity, so that the apparant open-texturedness of art is justifiable *since* games are open-textured. At crucial junctures in their arguments, Weitz and his supporters claim that there is an analogous relationship between games and art.[19] Moreover, when Wittgenstein attempted to explain the workings of language he alludes to the games within language in a metaphorical way to show how certain forms of communication are like the playing of a game. Yet Wittgenstein does not say that there is a precise similarity between games and linguistic forms of life.[20] In articulating his theory, however, Weitz is interpreting Wittgenstein's allusion to games and language activity analogically, and thus he presupposes an exact relationship between games and art or discourse about art. The evident differences indicated above between these two underscore that at best their relationship cannot be analogical, but perhaps metaphorical.

If one were to allow the view that art is like games only in a metaphorical sense, then a basic rewording of Weitz' thesis must be undertaken. For it is art *in terms of* the language which is appropriate to it which is said to be a kin to the playing of a game. There is an awkwardness in not seeing that art in itself cannot be compared to an activity, as if both were the same sort of thing. As it has been pointed out, art refers to various things or entities which are considered in terms of their total intergration. Conversely, games are activities in which one or more take part in. The two cannot be treated in the same way, without their differences coming into consideration. Apparently, it seems more appropriate to say that aesthetic discourse is in some metaphorical sense somewhat like the playing of a game. In this re-presentation of Weitz' view at least one is comparing two activities, rather than an object (work of art) and an activity (the playing of a game). Thus as a form of activity, discourse about art is seen as an open-textured phenomenon, which defies any general definition. This restricts Weitz' manner of speaking indiscriminately in contexts involving art objects *per se*, and discourse about such objects. However, this does not distort Weitz' position, since he and others who subscribe to his view argue that aesthetic discourse is a particular kind of linguistic activity, which one comes to recognize through familiarity with the language one uses. Having thus reduced Weitz' viewpoint to a more intelligible version, it is appropriate to consider how he can justify the so-called " recognition " of aesthetic discourse as such.

The question here can be put simply yet forcibly as follows : how does one come to recognize linguistic forms of life as those which are peculiar to art ? Clearly Weitz and his followers wish to escape the allusion to any sort of stable reference points, i.e. criteria, which would justify the recognition of such forms of life.[21] For criteria of even a provisional sort would bring them closer to the essentialism they are seeking to repudiate. Surely to say that such and such characteristics are the objective grounds for aesthetic discourse is to move towards the establishment of necessary and sufficient conditions for such discourse. Yet this is the dead end Weitz sees as the undefensible presupposition of all aesthetic theorizing. On the other hand, Weitz cannot go in the direction of maintaining that aesthetic discourse functions in the same way as emotive discourse, as perhaps the word " pain " functions in ordinary discourse. Surely his earlier rejection of the emotivist theory in aesthetics would prohibit his claiming that the word " art " works in the same way to replace some private experience, known only to the perceiving subject. More recently, though commenting upon a latter manuscript not actually authored by Wittgenstein (*Lectures and Conversations*), F. J. Coleman also disowns as too simplistic the possibility that one can interpret aesthetic discourse solely upon an emotive level of analysis.[22] Again the logical consequence of the emotivist interpretation would be that one cannot really know any public sense of the word " art ". Yet Weitz and others speak of the meaning of this term as something which is exemplified by various cases of linguistic use. However, whatever the nature of its meaning, " art " is not allowed criteria of recognition. Understandably, to allow such criteria would incur undercutting the thesis of the " adventurous " and " expansive " nature of art. Thus, one is faced with the internal contradiction of saying that the logic of the word " art " is recognizable in different language games, yet the ever-changing meaning of " art " itself prohibits the possibility of establishing criteria for the recognition of its meaning.

The difficulties surrounding the exegesis of how aesthetic discourse involves a particular kind of language activity are inherited by Weitz through his uncritical acceptance of Wittgenstein's notion of family resemblance. For where he talks of the application of general terms, Wittgenstein asks us to look for and see the resemblances in its use, and cautions us not to insist that there *must* be a resemblance. Yet what is this resemblance?

Does it result from pointing to specifiable denotata, or is it manifested through the intercrossings of various language games themselves. In his article " Something Common ", Robert J. Richman points to the difficulties of the notion of family resemblance as expounded by Wittgenstein in the *Investigations*, and his insights can be applied to the present discussion with telling results.[23]

Richman states that in seeing the limitations of the notion of family resemblance one must keep the following two issues distinct. First, the question of whether or not general univocal terms are meaningful because they allude to " something common " between them is itself an ambiguous question, since what is going to count as the " something common " is difficult to explicate. Secondly, the preceding question is an issue separate from the fact that certain general terms are purposefully ambiguous.[24] This is to say that certain general terms like " warm " or " bald " are used in ways which presuppose that they are not going to be used to refer to certain precise phenomena, but rather to degrees of the appearance of certain things.[25] It can be safely said that aesthetic discourse is not purposefully ambiguous, since one usually presupposes he knows what sort of things *should* be covered by its terms. For even Weitz argues that there is a logic to aesthetic discourse, and hence it is not inherently ambiguous. Thus the second issue Richman points to does not pertain to the present analysis.

The first point Richman brings out concerning the nature of the meaning of univocal general terms is actually the central issue which undermines the notion of family resemblance, and thus proves useful to the discussion at hand. Richman observes that the Wittgensteinian point that family resemblance is a phenomenon one sees in the use of language is difficult to explain. For is such resemblance the result of the interweaving of certain properties of linguistic activity, or does it arise from a direct reference to particular *denotata* ? The latter kind of answer would open up the possibility of introducing subsistent entities which are *the* " meaning " of general univocal terms. Wittgenstein, however, seeks to present an alternative to this essentialistic conception of meaning, so as to distinguish general terms from simple terms, such as ' red '. In doing this he introduces the notion of family resemblance to suggest an alternative to strict denotative meaning. His remedy, however, is not very useful since there is no clear way of explaining what constitutes family resemblance. This is to say that since such resemblance is not tied down to any reference point, one cannot specify the kind of things (the "something common") which would satisfy saying that there is such a resemblance. Even holding that the intercrossings of usages as the maeaning for general terms is inadequate, since one would still not be able to specify the precise points of interdiction on pain of advocating a referential basis of meaning. Furthermore, if one were to attempt strengthening the notion of family resemblance by arguing that *any* sequence of the denotata of some general term say T would come to constitute the something common making possible the family resemblance which is the meaning of T, then still one cannot continue to maintain a clear distinction between the nature of the meaning of T and that of a simple term say S. For one could always point to the quite obvious relationship of "being next to" which both respective denotata of T and S exhibit, and then argue in a way suggesting that T and S are alike in the nature of their meaning.[26]

Richman's interest is of course directed towards showing the weakness of the notion of family resemblance, and how on Wittgensteinian terms it cannot fend an important distinction between the meaning of simple and complex terms. Yet Richman's insights pertain to Weitz' conception of the role of family resemblance in aesthetic discourse. For where the latter speaks of the recognition of family resemblance, which makes aesthetic discourse somehow unique, the meaning of such "recognition" is problematic. It clearly cannot involve a reference to denotata, since Richman's analysis shows that family resemblance cannot, as a particular type of meaning, involve specific reference points. Hence what is one to look for where he turns to the specific family resemblance which determines that one is dealing with aesthetic discourse ? The question here has no answer because it fails to achieve a meaningful interrogative. For since the notion of family resemblance does not involve referring to anything, and since also connotatively family resemblance as a notion does not seem to unambiguously connote anything, one is really unable to claim that he identifies any consistent set of linguistic phenomena as *the* family resemblance which aesthetic discourse exemplifies.

Pursuing Richman's analysis indicates that if one were to argue that family resemblance is somehow directly the result of the intercrossings of usages, then it is in essence abstracted from various forms of linguistic life. Indeed, where Wittgenstein admonishes the reader not to insist that there are resemblances, but to look for the possibility of such a resemblance, he appears to suggest that the resemblance itself is somehow inferred by the language user in the special way the discourse proceeds. Yet if the resemblance peculiar to aesthetic discourse is in any way inferred, then it should be open to some sort of exemplification, and if not then it is somehow intuited. Yet to allow for demonstration would bring him closer to some sort of essentialism. Alternatively, to say that such resemblance is somehow intuitive, i.e. private, makes the fact of inter-subjective communication in aesthetics difficult if not impossible to explain. Thus Weitz' allusion to the notion of family resemblance forces him either to a form of essentialism, which he desires to avoid, or to an intuitionism, which renders impossible any explanation of such discourse. Towards the end Weitz speaks of peculiar " criteria of recognition " for discourse dealing with the arts, though these criteria are taken to be neither necessary nor sufficient. Yet what kind of criteria can the latter be ? He alludes to them as bundles of properties which are somehow the excuse for applying a descriptive use of the word " art ". Yet these properties, conditions, etc. seem to suggest stable reference points, though Weitz would deny that they must be present in order to recognize something as art. The ambiguity here has not been seen by recent analysis.

The thrust of Richman's analysis also has interesting implications for the manner in which Weitz argues, weaving as he does in and out of contexts involving art objects and aesthetic discourse itself, taken meta-linguistically. As it has been shown, Weitz apparently believes that somehow the very variety of art works becomes reflected in talk about art, and possibly contributes to the open-texturedness of the latter. Yet if such discourse is somehow intimately connected with the physical phenomena it deals with, then these phenomena become criteria or sources of explication for the use of the terms which concerns such discourse. However this alternative cannot be admitted since it again leads towards stable criteria of reference, which is a form of essentialism. This not only suggests that one cannot argues in terms which intercross contexts dealing with art objects and contexts involving discourse about such objects, but a basic Weitzian pre-supposition that art objects somehow influence the open-texturedness of aesthetic discourse becomes less tenable. The nature of the connectedness between the two contexts of art object and aesthetic discourse cannot be consistently confirmed without tying down the notion of family resemblance in aesthetic discourse to some sort of reference.

Perhaps most striking is the point that according to Richman one cannot really specify where there is *no* family resemblance. This is to say that even if one were able to specify in some way that some modes of linguistic behaviour exhibit a family resemblance, the notion of family resemblance because of its inherent opacity, does not in itself provide any internal means by which to say that there is no family resemblance with respect to other modes of linguistic activity.[27] The ramifications for what has been said about aesthetic discourse thus far are quite significant. For one can point to nothing in the so-called " logic " of aesthetic discourse which would explicitly exclude saying that such and such linguistic activity is not aesthetic discourse. Here one may ask what sort of " logic " can this be which provides no internal means of expressing contradiction ? Without a means of saying that something is not aesthetic discourse, Weitz cannot defend his general thesis that there is a particular kind of discourse which *is* aesthetic discourse.

The line of criticism suggested above differs from Mandlebaum's in that : (1) it concentrates upon a distinction between games (as activities) and art objects, and (2) it suggests a serious problem in explaining how one comes to *recognize* a particular kind of discourse as aesthetic discourse. Neither Weitz nor Mandlebaum care to even consider the implications of these two points, and both presuppose that they can speak of aesthetic discourse interchangeably with aesthetic objects, with the latter somehow influencing aesthetic discourse. Though Mandlebaum alludes to Richman's article, the former misses the depth of implication in Richman's work, concentrating instead on a too literal interpretation of the notion of " family resemblance ". Both

Mandlebaum and Weitz fail to see when and how the conjuring trick of the fact of aesthetic discourse has taken place. As it has been repeatedly brought out above, to recognize discourse dealing with art presupposes that one already has criteria for the application of the term. This means that one already has some knowledge of such discourse or language of art. Yet how does this knowledge by recognition come about? One seems to be here in the same position as that described by Wittgenstein himself, where he says that language, like a spider's web, dissolves at the very touch of explication. Hence to even suggest that aesthetic discourse is a special kind of discourse since it reflects in its many forms a particular pattern, or resemblance, is to assume already that one knows what such discourse is supposed to be. How else can the pattern be recognized ? Thus the delicate *fact* of language is torn by the crude requirements of recognition implicit in the very articulation of the notion of family resemblance.

III

Some attempt should be made perhaps to pursue the question concerning how discourse about art does come about. In doing so it is interesting to return to Weittgenstein once more, specifically to his last known manuscript : *On Certainty*, for some illuminating insights. In the latter he endeavours to clarify some basic issues involving the problem of knowledge. In a passage where he considers the implications of G. E. Moore's views concerning how it can be said that one knows matters of immediate experience, Weittgenstein observes that to say that one knows some statement to be true implies that one can produce " compelling " reasons to bring to bear so as to prove that it is true.[28] This insight has interesting ramifications when applied to issues of how one comes to recognize aesthetic discourse. Hence, how can one say that it is *known* that some sort of linguistic behaviour is aesthetic discourse ? What sort of compelling reasons can he bring forth to *prove* what is supposed to be known ? Weitz and those who subscribe to his view would surely insist that some sort of proof should be forthcoming before one can accept any account of one's knowing that something is aesthetic discourse. Proof for these analysts would be, as has been repeatedly stated, some allusion to family rsemblances. Yet apart from the lucidity of the latter notion, the new difficulty here is to make sense of the very attempt at *proving* the knowing that something is aesthetic discourse. The latter seems to defy justification by any sort of proof, because it is a form of linguistic behaviour whose certainty one learns *along with*, in conjunction with, the very learning of a natural language.

It seems more accurate to say that one believes some particular linguistic behaviour is aesthetic discourse. Belief here is taken in a Peircean sense, involving action based upon success in a given context of language use.[29] Its certainty arises from the very practice of language, rather than from proving that aesthetic discourse must somehow correspond to certain exterior facts in the spatio-temporal world. One might say that aesthetic discourse is an aspect of the spontaneous development of a culture's language, and thus cannot be *proven*, as if some claim were open to constant doubt and always must be verified by appealing to evidence. To ask for such verification is to miss its significance, insofar as this is *not* a matter of there being offered a choice of say either the acceptance of a general definition someone suggests, or adopting some vocalized mode of speach. Rather, aesthetic discourse is a form of linguistic life which is inseparable from one's actual success in communicating in a culture.

To speak of aesthetic discourse in terms involving one's believing entails *pragmatic-semantical* considerations. This is to say that the belief here is by someone, who, on the basis of prior success in his use of language in some contexts, believes that the same mode of language will work (i.e. communicate) on a future occasion. Thus the language user is related to the language behaviour he employs from the view point of its success or its being true for communicating in a given context. There is an added flexibility in this approach towards analysing aesthetic discourse. For if factors within the believer's environment bring about a change so that new or innovative manifestations of language use are required to speak about new phenomena in art, then the language user must adopt such new modes of discourse so as to communicate about aesthetic objects. Hence one can say that as an environment undergoes transformations, the aesthetic discourse operative within it also undesrgoe change. However, older manifestations of this kind of discourse are not inaccurate or somehow false examples of aesthetic discourse. Rather, the latter once served a purpose, whereas they can no longer serve that purpose again due to the environmental changes. There is not a question of proving one mode of aesthetic discourse is true, whereas another is false. In essence there is no ideal form of aesthetic communication.. Apparently, what one has here is a question of what happens to work, for someone, at some particular time, in a certain context.

There is a profound difference between the view expressed above, and Weitz' view involving the recognition of family resemblances. For recognition in the latter view entails the notion of acceptance. This is to say that where Weitz requires that one recognize the peculiar resemblances exhibited by cases of aesthetic discourse, he is supposing that there are patterns in discourse, which one can accept as indicative of a particular kind of language activity. Thus the idea of recognition, in its involvement of acceptance, also implies alluding to proof, or " compelling reasons ", to justify the act of accepting. However, the aesthetic discourse being accepted is viewed by the acceptor *inscriptionally*, that is, the specific linguistic form of life is taken as a syntactic phenomenon, or a sequence of syntactically concatenated and verbalized expressions. Thus, in Weitz' view, the language user is related to the language he is supposed to recognize as aesthetic discourse from the perspective of a *pragmatico-syntactical* relation. Thus the act of recognition, with its implicit notion of acceptance, does not have the language user employing any linguistic expression. Most likely,, the reason for considering aesthetic discourse in such a syntactical manner is due to Weitz' strict adaptation of Wittgenstein's idea of *looking for* family resemblances. Apparently, the notion of looking entails " looking at ", which turns the phenomenon of aesthetic discourse into something which is *to be* observed, rather than an activity which one gradually learns about through his practice of the language.

In essence Weitz and his followers are saying that so variable is the pattern of aesthetic discourse, that no essentialist theory thus far is flexible enough to explain it. Their approach then sees aesthetic discourse from the outside, as *de facto* present.

The latter is different from the approach which considers the belief factor which is operative in the very practice of such discourse.

Moreover, generally it may be said that a fundamental reason as to why aestheticians have had difficulties in presenting their positions, whether essentialist or of any other variety, is because they endeavour to find a single theory to cover many different objects, originating in various culture, at different times. Even Weitz, in his criticism of other theories of aesthetic discourse, finds fault because they are not complete enough to cover *constant* exceptions. Hence he proposes that one observe language in aesthetic contexts so as to achieve a freedom from exceptions manifested by the very variety of art. However, particularity evidently should be preserved in any account of discourse about art. Art critics tend to seek out similarities between art objects, rather than considering the place these kinds of objects have in different culture. For example, one often finds them assuming that because say an Egyptian mirror is found in an art museum, it is a kind of art, along with other art objects. Hence they seek to discover points of congruence between it and other forms of aesthetic expression. Their approach, however, misses the individuality of the object, the cultural context from which it arose, and the entire linguistic form of life which was sensitive to it.[30]

One can only suggest in a peripheral manner the kind of factors which enter into the question when discourse about the arts is considered in terms of the beliefs which underlie its success as communication. Evidently, the complexity of the task would take this investigation beyond its intended bounds of indicating the shortcomings of Weitz' general position. One major point, however, suffices to underscore the point of departure between Weitz and the proposed alternative. This to say that the latter by-passes questions dealing with the justification of recognizing patterns of aesthetic discourse. Rather, it raises the question of why one believes that the discourse he engages in with respect to certain objects will function to communicate with other people. The very thrust of this kind of question will necessitate the introduction of cases in the past where it has worked, as well as the specification of the reasons why it would not or does not work to communicate. The factors which contribute to the development of these beliefs may be quite varied, since the reasons animating the believing may very well range over a wide area of anthropological factors. There is no presupposing here of what aesthetic discourse is, or what it should be. Rather, the issue becomes why some particular form of communication succeedes.

The emphasis upon noting the particularities within aesthetic communication does not preclude that general statements cannot be made about such discourse. Apparently, the shared fact that *human* communication is operative in diverse *human* environments will manifest points of similarity in the way in which different people talk about art objects. The latter, however, should not become the paramount factor which somehow comes to be the key point of analysis in understanding the nature of aesthetic discourse.

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NOTES

1. Wladyslaw Tatarkiewicz, also : T. J. Diffey, " What is Art ? The Problem of Definition Today, " *British Journal of Aesthetics*, 11, (1971), 146–147., " Essentialism and the Definition of Art, " *British Journal of Aesthetics*, 13, (1973), 105–106.

2. Morris Weitz, " The Role of Theory in Aesthetics, " *Journal of Aesthetics and Art Criticism*, 15, (1956), 30–31. (Evident shifting from talk about aesthetic discourse to talk of aesthetic objects themselves is seen in the way Weitz goes from considering the logic of the word " art " p. 30, to considering the open texture of art objects p. 31.)

3. Ibid., p. 30.

4. Ibid., p. 32.

5. Ibid., p. 33.

6. Ibid., p. 30.

7. William E. Kennick, " Does Traditional Aesthetics Rest on A Mistake, " *Mind*, 67, (1958), 319–320.

8. William Elton, ed. *Aesthetics and Language*, (Oxford, 1967), 104–105, and 23–24.

9. Maurice Mandelbaum, " Family Resemblances and Generalisation Concerning the Arts, " *American Philosophical Quarterly*, 2, (1965), 221, also see T. J. Diffey, Op. Cit , 105.

10. Ludwig Wittgenstein, *Philosophical Investigations*, (Macmillan 1970), 31 e, para. 66.

11. David Pears, *Luding Wittgenstein*, (The Viking Press, 1970)73-75.

12. William G. Bywater, " Who's in the Warehouse Now ? " *Journal of Aesthetics and Art Criticism*, (Summer, 1972), 524–525.

13. Maurice Mandelbaum, Op. Cit., 226.

14. Morris Weitz, D. W. Peetz, Op. Cit. 30, *also* " The Autonomy of Aesthetics, " *British Journal of Aesthetics*, 8, (1968), 177-178.

15. Morris Weitz, Op. Cit., 31.

16. Francis J. Coleman, " A Critical Examination of Wittgenstein's Aesthetics, " *American Philosophical Quarterly*, 5, (1968), 259.

17. William E. Kennick. Op. Cit., 320–321.

18. John Dewey, *The Philosophy of Jonn Dewey*, Volume II., John J. McDermott, editor, (G. P. Putnam's Sons, 1973), 529.

19. Morris Weitz, Op Cit., 31.

20. Ludwig Wittgenstein, *Philosophical Investigations* (Macmillan, 1970), 6e–7e.

21. William Kennick, Op. Cit. 322–323.

22. Francis J. Coleman, " A Critical Examination of Wittgenstein's Aesthetics, " 260.

23. Robert J. Richman, " Something Common, " *The Journal of Philosophy*, LIX, (1962).

24. Ibid., 821.

25. Ibid., 824.

26. Ibid., 827–828.

27. Ibid., 828–829.

28. Ludwig Wittgenstein, *On Certainty*, (Harper & Row, 1972), G. E. M. Anscombe, and G. H. vonWright editors, 32e–34e.

29. Charles S. Peirce, " The Fixation of Belief, " in *Pragmatic Philosophy*, (Doubleday, 1966), Amelie Rotary, editor, 7–9.

30. Paul Ziff, " The Task of Defining a Work of Art, " in *Contemporary Studies in Aesthetics*, Francis J. Coleman, editor, (McGraw–Hill. 1968), 108.

(The position developed here differs from Ziff's in sofar as it concentrates upon the *beliefs* which underlie this particular kind of discourse, rather than the often incalculable consequences of aesthetic discourse.)

RELATIVITY OF LANGUAGE AND CULTURE*

I

In this paper I propose to answer briefly the following inter-related questions. Does language express and suppress reality simultaneously ? Does reality have an ascertainable identity of its own independently or the language used to talk about it ? In other words, can we logically and coherently say, " language and reality are self-contained and exclusive 'things' ? " Or, will it be right to say, " language is a part of reality and their identities are historically inter-woven within a common cultural fabric ? Does not successful communication between the individuals belonging to different cultures necessitate the postulation of a common and independent extra-linguistic and extra-cultural world ? What is the role and status of concepts in making inter-cultural communication possible ?

II

Thought, Language and Culture :

The other day I was listening to the Chief Commissioner of Andaman and Nicobar Islands, Shri Krishnatry, who was telling me with a plethora of examples how the lack of communication between the settlers and the original inhabitants is steadily ruining the latter. From ordinary daily routine matters to extra-ordinararily abstract concepts all are handled by a common generic competence and that is, symbolic competence. Of course we may draw lines of distinction between signal, sign and symbol. But we are well-advised to bear in mind that the distinction between them is one of degree and not of kind. For the identification of an object, whether it is material or mental, we do need something else, i.e. other than the object itself and which can " stand for " or symbolise it.

Symbolisation marks the beginning of the release of the mind or the human consciousness from its blind and immediate encounter with the object. This release, however, competently initiated and executed, is bound to be partial and can never be complete. In other words, there is always a real linkage, may be it is invisible to start with, between, say, what is described and the descriptive expression (s) even between name and nominatum. Symbols are, therefore, somehow fastened to a culture, its material and mental objects. One might go further and add, every system of symbols and their rules of connection and interpretation, i.e. language, is not only culture-bound but also through culture earth-bound.

Language and expression are two of the many other interrelated ingredients of a complex and comprehensive fabric of culture. Man generally expresses himself in and through language, but not necessarily so. Extra-linguistic expressions are also there. Since language happens to be the most essential ingredient of man's self-expression, and also of his experience of other things and beings, his competence to make use of it is very important. The importance is two-fold : first, it enables him to grasp intimately his material environment and cultural milieu, and, secondly, to communicate the same to other men. In brief, language presents our environment, both material and cultural, to ourselves and gives us the ability to share our experiences, ideas and emotions with others. At the one end language releases our mind from the bondage of immediacy, immediacy of experience, indefinite acquaintance with the objects of experience, and at the other end it enables us to share the results of this release or freedom with others.

Perhaps there is a native propensity in man to express himself. An infant who is yet to learn and use a language makes some noise or sound to express his experience of, say, want or pain or joy.[1] A dumb man makes gestures and inarticulate sounds to express himself and communicate. A normal grown up man uses language to express not only his joy and satisfaction but also his suffering and disappointment. Expression is a sort of purgation, which eases one's burden of experience, which one intends to share with others and by sharing it one enjoys intellectual and emotional satisfaction. The urge which transforms an idea into action is also involved in the human intention to share his experience with others.

III

Meaning, Communication and its Different Models :

Let us now look a little closely into the elements of a (meaning) communication situation. How one communicates ? What makes communication possible ? How to explain the gap between the content of intended communication and that which is actually communicated ? The elements and the complexity of the (meaning) communication situation have been differently understood and analysed. There are two-variate, three-variate and also multi-variate models of it. Common to all models of communication situation is of course *meaning*. Unless and until something can " mean " or " stand for " or " symbolise " some other thing, a situation cannot be a communication situation.

But the basic element of the communication situation, i.e. meaning, lends itself to various interpretations. At one stage, a strictly behaviourist conception of meaning was very popular. The behaviourist defines the meaning of a linguistic form as predictable pattern within a mini-mix range of relationship between what the speaker utters and how the hearer responds. This is a simple two-variate model of communication situation within which meaning has been defined. Although the behaviourist admits, in principle that to get an accurate definition of meaning for every form of language we do need accurate knowledge of everything in the speaker's world, but in fact in terms of two-variate model it is easy to define the meanings only of the " simple " words like water, salt and chair. When we are called upon to spell out the meanings of words like god, soul and love, we are immediately landed in difficulties. To think that a linguistic function has only two parts, the linguistic form, on the one hand, and the related non-linguistic events, including contextual ones, on the other, is simplistic. It is all right to say, for example, " Water means H_2O ". But it is not clear why *water* would mean H_2O ? In other words, what prevents one from saying, " the meaning relationship between *water* and H_2O is arbitrary ". The defender of the two-variate model might now proceed on to spell out the meanings of individual letters H_2 and O and the related rules of interpretation together with the concerned definitions. It is perhaps realising the complexity of meaning in a communication situation that the discerning behaviourist impresses on us the necessity of " knowing everything in the speaker's world ".[2]

To remove the inadequacy of the two-variate model some philosophers of language have developed a three-variate model of meaning. Patanjali, for instance, thinks that in a meaning situation there are three components—the word, the meaning and the object which are mixed up in common usage. When one utters the word " water ", one finds that the word, the meaning and the object are mixed up; the word is transmitted as vibration of air molecules; the actual water exists independently of all human consciousness and conventions of nomenclature. What relates these two isolates is the human mind. And meaning is the *relationship* which associates word and object and is not itself a " thing ".

The three-variate model is obviously an improvement upon the two-variate one. But even it does not adequately clarify the relation of language and culture. One might point out that both word and object belong to the same material world and a line of distinction should be drawn between it and the mental world in which the two are said to be related. The question is whether there is a fixed and definite universal mental world in which the word-object relationship could be generalised without exception ? The mental world being itself influenced and limited as it is by its cultural environment, the question of its universality turns out to be purely speculative on scrutiny. The linguistic behaviour is distinguishable from its subject–matter or content. First, there is a relationship between linguistic behaviour, a part of the material world, and linguistic structure of the mental world. Secondly, there is a relationship between the cultural structure and the objects spoken about or referred to and which are mostly non-linguistic in character. And, finally, there is a relationship between linguistic structure and cultural structure both of which are in a sense parts of the mental world, and this relationship is what may be called meaning. Interestingly enough, both the terms of the meaning relationship, linguistic structure and cultural structure, have their material correlates. The former is related to linguistic behaviour and the latter to the objects referred to. It is in and through the material correlates of linguistic structure and cultural structure that their " mental " meaning relationship could be given an objective formulation and which can explain the socio-historical variation in the word-object relationship and at the same time lends itself to objective and structural tests. The linguist is primarily interested in the word-object relationship and the ethnographer in the relationship between cultural structure and the phenomena talked about (contents) which are mostly non-linguistic in character.

The adequacy of the three-variate model too has been questioned by some contemporary language philosophers of the Wittgensteinian persuasion. Among other things, they have rightly pointed out the enormous, almost endless, complexity of every communication situation and the inadequacy of formal logical systems for the purpose of analysing it. The meaning of a word or a group of words, e.g. a statement, depends on so many factors—the speaker or the writer, the hearer or the reader, history and the time-frame, society or culture in the concerned context. All these factors may be taken together and designated as situation. So one might say " the " meaning of an expression depends upon " the " logic of the situation. This formulation is open to depth analysis. First, meaning is not a static entity. Secondly, the logic of the situation is itself an unduly definitive expression. For the variables of the situation take on a wide range of values. The identity (historical and otherwise) of the persons concerned, the speaker, the hearer and others who may be present in the situation but whose participation in it may be of different sorts, introduces almost incalculable and unpredictable elements. Consequently, what is called situation is an extremely complex and variable (but not necessarily vague) thing. The logically queer aspect of the situational dependence of the meaning of a statement may be easily illustrated. For example, I say (*a*) " there is a book on the table " and someone " contradicts " it and says (*b*) " there is no book on the table ". One can easily conceive a situation in which (*a*) and (*b*) are not at all contradictory. When I say (*a*) I may be in a state of dream or saying it jokingly pointing my finger to a dummy book or even sometning else, e.g. a notebook. Once we closely look into the complexity of the communication-situation the relativity of meanings becomes very obvious.

IV

Relativity of Meanings and Problems of Translation :

Relativity of meanings raises some obvious problems and translation. Meanings of expressions are culture-bound, i.e. determined or influenced by culture. From one point of view language is best described as a part of culture. From another point of view, which is equally respectable, one might say that culture itself is embedded in language. The descriptive linguist takes pains to pint out the close relationship between ethnology and linguistics. Most of the semantic problems of the translator could be adequately tackled within the composite framework of social anthropology and descriptive linguistics.

Environed by a particular culture and used to a particular language, most of us tend to forget the predicament of the translator engaged in translating expressions of other language in our own. The predicament becomes rather serious when one attempts to translate from languages representing simple cultures to languages representing complex cultures. In the complex cultures languages are rich in alternative, equivalent or near-equivalent expressions. When the translator is called upon to translate expressions of complex cultures, which are generically similar but specifically different, into at least near-equivalent expressions of simple cultures, his problem becomes even more serious. To the problem of seriousness is added that of inaccuracy when the translator is concerned with cultures which widely differ in the scale of abstractness–and–concreteness. Some languages are particularly suitable for expressing objects and images. Some languages enable us better to express the abstract ideas and compound them. It is not entirely without point when we are told of the richness of the Indo-European language-family in the context of philosophical ideas.

Words and expressions are esentially the symbols for features of the culture. The translator and the comparative linguist are required to follow the precise relationship of cultural information to the semantic problems. These problems are basically exercises in finding out of badly needed but elusive linguistic equivalences. The elusive character of the badly needed equivalences is due to language-culture relativity and which could be studied under different headings, (*a*) ecological, (*b*) material, (*c*) social and (*d*) religio-ethical.[3]

The ecological features of culture are reflected in language and vary from territory to territory. The extremity of ecological variation raises surprising problems for the translator. Seasonal variation, variety of flora and fauna, types of natural calamities or turbulences, e.g. dust-storm, snow-storm and flood are not uniformly present all over the world. The features of tropical vegetation can hardly be translated in the Eskimo language. To a Mayan Indian the word " desert " means an " abandoned place ". But one can easily find out that " desert " and " abandoned place" are not strictly equivalent unless the implicit concept underlying these two terms, i.e. lack of human population, is brought to the fore.

The problems posed by variation in material culture-features are even more complex in character. The concept of cooked food is unknown to the Andaman islanders who are used to taking raw fish and wild fowl. The words like " walled city ", " gate " and " carpet " have no equivalent in the languages of the tribal people whose material equipments of life are altogether different and who live under the sky or in the deep forest.

Even where the near equivalent of material form is found, the problem of the translator does not completely disappear. For the question of different interpretations of the same or similar material forms and ecological features still remains. The " sky " is interpreted in some cultures as " heaven " or " space " and the " underground area " of the earth as " hell ". Here too Ptolemic and Copernican Cosmogonies introduce different rules of interpretation. Caste-features are unknown in some cultures and where these have been taken to be equivalent of class-features.

The relativity of religious and ethical features is perhaps the most perplexing thing for the translator. As we know, most of the tribal deities are peculiarly local and so are the modes of their worship. Words like " Holy Spirit " and " Holy Ghost " have no equivalent expressions in many non-Christian tribal languages. The word " Manasā " (the Snake-Goddess of Bengal) cannot be translated in a desert gypsy culture where snake-god is unknown and the necessary expression is uncalled for.

Similarly one might easily point out the enormous difference in what is meant by ethical words like " good ", " bad ", " right ", " wrong ", " praise ", " blame ", " remorse ", " resentment ", and " regret " in different cultures. The response to this argument that the difference is confined to the exemplifications or applications of these ethical concepts and has nothing to do with the meanings of the concepts themselves is well known but hardly convincing. For, it suggests, among other things, (*a*) there are some apriori and inherent meanings of these concepts which could be identified independently of their empirical examples or fields of application, and (*b*) the meanings of these concepts are irrelative or absolute, i.e. context-invariant. Ethical relativity is a part of cultural relativity and language-features are subject to this general truth. Semantic Platonism provides no solution of the problem.

V

Between the Words and the World are the Concepts :

Up to now I have been analysing how linguistic expressions, simple and complex, concrete and abstract, are determined and influenced by culture-features, material, mental, moral and so on. In the process I was highlighting the translation-problems resulting from culture-language relativity. Had these problems been absolutely insurmountable, then different peoples would have been completely shut out and separated from each other, rendering meaningful communication between them impossible and making translation an equally impossible task. The case is obviously not so hopeless. We, human beings, belonging to different cultures and speaking different languages, do cummunicate between ourselves and translate each other's ideas and expressions. As it happnens in some cases, this translation may be good, bad or indifferent and again to ascertain that we have to evolve a consensus on the meta-linguistic criteria to be used to determine the correctness or otherwise of translation. Since language is related to culture, the task of translation necessitates *adaptation* in some form or other. When we tell a Mayan Indian that " desert " means " abandoned place " our translation is tinged by adaptation. If in the ecology of one particular culture, there is nothing like what we call desert, the only way left for us to make him understand what we mean by it is to say something like " abandoned place " which he can understand with the help of a *concept*, " lack of human population ", which could possibly establish, though inexactly, a semantic correlation between " desert " (of English language) and " abandoned place" (of Mayan Indian language).

At one stage some philosophers like Russell and Wittgenstein went to the extent of suggesting that facts and propositions are directly and uniquely related. Some Indian philosophers have observed that by the *power* of their meanings, linguistic expressions enable us to directly identify the referents, whatever they might be. This robust claim regarding a direct relationship between propositions and facts, of words and objects has in course of time given way to very different and diluted semantic theories which bear unmistakable imprint of language-culture relativity.[4]

When the later Wittgenstein advised us to leave language as it is and not to mould it in our formal logical structures, he overstates the theory of linguistic relativity and verily berates the significance of the conceptual structure existing between words and the world, between signs or symbols and facts. Certainly by language we express as well as suppress, decode and encode our thoughts and yet communicate, but that does not mean that this performance is explainable purely in terms of certain rules of use of the concerned language in a given situation. This implies something more. Firstly we can and in fact do penetrate phonetic clothing and grammatical disguise and somehow get to that which is clothed and disguised, i.e. the underlying reality of language. Secondly, the very fact that we can discover the true logical forms concealed under misleading grammatical forms of different expressions shows that we do possess and use, though pre-reflectively, certain rules in terms of which the decoding and encoding performances could be identified, elucidated and clarified. And as a result of that, in spite of syntactic aberrations, semantic inexactitude and grammatical disguise, we can *dis*-cover the *real* objects underlying different languages irrespective of their cultural locus or situational context.[5]

One might agree with us on this point and yet raise the objection that the rules which enable us to find out the real objects penetrating the misleading language fabric do not converge on a definite segment of reality, enabling us to identify it uniquely. Quine, for instance, thinks that even if we assume that there is such an underlying reality, it is not clear how could we possibly determine it uniquely. And in that case the sceptic's argument regarding the reality-language relationship remains substantially unanswered. He can merrily go on saying (*a*) idea-object relationship is doubtful and (*b*) so is expression (or word)-idea relation. Nothing other than neural-behavioural test can put a practical stop to this doubting habit. But one is again brought back to the *sense of reality* when one is reminded (1) that the neural-behavioural responses are *not* self-caused and self-regulated and further (2) that the process of causation and regulation itself is not explainable without residue in terms of psychological or logical behaviourism. Nobody would deny that natural languages are, not free from misleading referring expressions. Cases of failure in referring should not be taken as a last stricture against natural languages. The *forms* of misleading reference, thanks to modern researches in formal logic and above all human insight, can be *transformed* enabling us to ascertain how and where the intended referring expressions have gone wrong. Besides, we should remember that all objects of reference are not to the same type. For example, material objects, mental objects, some cultural objects, including the art ones, are obviously not of the same type.[6]

We do not identify reality directly in and through the expressions of natural languages which are highly culture-relative. Language-culture relativity does not make inter-cultural communication impossible. The ground of possibility is to be found in conceptual affinity. I say affinity but not identity. Hidden in every natural language is a world-view. This becomes very evident when we study different primitive languages separated by space and time. Concepts themselves are also relative, of course in a much more restrictive sense. On the one hand, concepts are partially subject to what we call vagaries and vagueness of natural language and, on the other, at least partially reflective of and addressed to the objects of the concerned space-time frame work. After all concepts are also formed and in the course of time and through test transformed. If you raise the issue to a higher level and ask the question : what about the concept-forming concepts ? My response would be : what is true of the first set of concepts is also true, of course to a lesser extent, of the second set.

VI

Conclusion :

Language, as I have said before, is embedded in culture.[7] Language partly expresses and partly suppresses the world of objects, objects of different types. Language is highly influenced, both concretely and abstractly, by its material and cultural conditions. Our linguistic competence is evident in its best form when it comes to the question of using our own mother-tongue or natural language. On the rich base of natural language to construct and use formal and artificial languages poses no serious problem. Whether it is a question of tackling problems and translation or it is a question of creative thinking, all things being equal, man is likely to excel most in using his own mother-tongue. All that I have been trying to say converges on the point that the best aid to correct and creative thinking is to be found in the mother-tongue, no matter whether it is Hindi or Tamil, Bengali or Marathi.

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NOTES

* This paper was first read in a meeting held in Poona on August 2, 1975, in connection with the formal release of *Marathi Encyclopaedia of Philosophy*.

1. Jean Piaget, *The Language and Thought of the Child*, London, 1959.

2. Leonard Bloomfield, *Language*, New York, 1951; see also, B. F. Skinner, *Verbal Behavior*, New York, 1957.

3. Dell Hymes, ed., *Language in Culture and Society : A Reader in Linguistics and Anthropology*, New York, 1964.

4. See, for example, Ludwig Wittgenstein, *Tractatus*, London, 1972; *Investigations*, Oxford, 1963; *Philosophical Grammar*, Oxford, 1974; B Russell, *Logic and Knowledge*. London, 1956.

5. J. J. Katz, *Linguistic Philosophy : The Underlying Reality of Language and its Philosophical import*, London, 1971; see also, Benjamin L. Whorf, *Language, Thought and Reality*, Camb. Mass., 1957; W. V. Quine, *Word and Object*, Camb. Mass., 1960.

6. Edmund Husserl, *Formal and Transcendental Logic*, tr. Dorion Cairns, The Hague, 1969; see also, Michael Dummett, *Frege : Philosophy of Language*, London, 1973.

7. D. P. Chattopadhyaya, *Societies and Cultures*, Bharatiya Vidya Bhavan, Bombay, 1973; see also his *Individuls and Worlds*, Oxford University Press (forthcoming).

DIALOGUE

Canadian Philosophical Review–Revue Canadienne de Philosophie Vol. XIV – 1975 – No. 4.

Articles

Infini, substance et attributs. Sur le spinozisme (a propos d'une etude magistrale) ..Jean Bernhardt

Dieu garant de veracite ou Reid critique de Descartes ..Louise Marcil-Lacoste

Wilfrid Sellars on Scientific Realism ..Bas C.van Fraassen

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Aitia : a generative factor in Aristotle's philosophy ..J. M. Moravcsik

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One Ought to do What One Thinks One Ought To do ..Jerome E. Bickenbach

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Catching Up With Castaneda ..L. W. Summer

Comptes Rendus–Book Reviews

KALIDAS BHATTACHARYYA
AND
THE LOGIC OF ALTERNATION

Kalidas Bhattacharyya is, undoubtedly, one of the foremost of living philosophers in contemporary India. Along with K. C. Bhattacharyya and N. V. Banerjee, he may be said to have renewed the tradition of creative philosophising in this country which had perhaps been blocked by the historical necessity of coming to terms with an alien tradition in philosophy which was forced on our notice due to the imposition of British rule in India. Yet, though "Alternative Standpoints in Philosophy"[1] was published as early as 1953, little discussion has taken place regarding the philosophical thesis of this extraordinary book. Unfortunately the book has been out of print for a long time and in fact has been unavailable to students of philosophy both here and abroad as large stocks of it happened to have been burnt in some accident only a few years after its publication. Still, the general neglect which this work has received on the part of most students of philosophy in India is inexcusable, and it is time that it receives the attention which, in my opinion, it so richly deserves.

However, as it is not easy for most students to understand the contentions of the author due to the difficulties of his thought and style in this book, I think it would be helpful if this paper is confined only to an exposition of his major thesis in the work mentioned above. A critical discussion and assessment of the author's contentions must await a proper understanding of what he has said, and may be undertaken later in a sequel to this paper.

The fact of knowledge, as everybody knows, has seemed puzzling to most thinkers. From the Sophists and Socrates to the logical positivists of today, there has been a continuous concern with what has come to be called "the problem of knowledge". However diverse the solutions to the problem, they have generally seemed unconvincing to many, if not most, philosophers. Varying from the indubitable certainty of self at the one end to the equally indubitable certainly of sense-data on the other, the solutions seem to form a continum where one can choose whatever one likes. Mr. Bhattacharyya's explanation of this variability is so capable and original that any thinker who still wishes to attempt a unimodal[2] explanation must first come to terms with it.

Whenever something seems problematic, it is mostly because we feel the conjoint validity of things[3] which seem to be incompatible in their nature. The solution is generally reached when we come to feel that either the things are not incompatible in their nature or that they are not conjointly valid. The various solutions to the problem of knowledge can be seen as attempts in either of these directions.

The "Knowledge-Situation" can seem problematic *only* if we find two things conjoined in it which reveal themselves to be incompatible in their natures. The occurence of knowledge is a fact from which the thinker takes his start. But "knowledge" is not a thing like tables or chairs; rather, it is more like relations which involve a reference to terms between which they hold. "Knowledge" is always the "knowledge" *of* object and not just knowledge itself. This "*of*", it should be noted, is not the "of" of identity as in "the City of Calcutta". Rather, it denotes the *distinctness* of the object *from* the fact of its being known and, at the same time, an *euqually close* unity between them. In fact leaving aside error and illusion, the "knowledge of object" should be the same as the object itself. The other term in the "knowledge-situation" is traditionally called the "subject" or the "self".

Whatever may be one's difficulties with respect to these concepts, a distinction has always been drawn between the way in which self knows itself and the way in which it knows an object. Whatever be the name that has been given to this distinction, the difference between self-consciousness and the consciousness of object has been recognised by most thinkers. It, however, does not seem to have been noticed that the relation between the two is of, at least, seeming exclusion. The movement towards self-consciousness is a movement away from the consciousness of the object and while we are conscious of the object we are just unaware of the fact of consciousness or of the subject that is conscious of the o bject.

The "Knowledge-situation", thus, presents a problem, for it reveals a close unity of two terms which, however, seem also opposed to each other. The usual solutions of this problem have taken either the form of asserting the primacy or even the absolute reality of the Subject or the Object or the denial that there is any opposition between them.[4] The subject has seemed so self-evident to many thinkers and an independent object so inconceivable that they have found it difficult to understand in what the objectivity of the object lies. The movement from epistemological objectivity to metaphysical objectivity is the central problem in almost all the great thinkers from Descartes to Kant and though they all find alternative routes to their solutions (or do not find a route at all) they are convinced that the immediate awareness of consciousness is indubitable in a sense in which the consciousness of the object is not.

On the other hand, the whole movement of modern realism is based on the immediately felt independence of the object from the fact of its being known. The object is, thus, revealed to be independent in its very being, the situation of being known being essentially accidental to its very nature. It, thus, is real, self-subsistent in a sense in which the subject can never be; for it is never known as an object, and seems, at most, the shadowy projection of the grammatical " I " which accompanies most of our judgements. Further, the contingency of knowledge-situation for the object reacts back on the subject and makes it contingent, for while the object reveals itself to be independent of the knowledge-situation, the subject is inevitably bound to and dependent on it.

The opposition between the two terms in the " knowledge-situation " is, thus, the reason for the divergent movements in philosophy. But the very fact of the " knowledge-situation " reveals that there is also a close unity between them. The question, then, arises : " can we intelligibly conceive of a unity of elements which are in mutual opposition to each other ? " Bhattacharyya's answer is that we can, and the answer is extensively elaborated in his doctrine of what we have called in the title of this paper " the logic of alternation ".

The unity of alternatives in a disjunctive judgement, is, according to Bhattacharyya, such a unity. The disjunctive judgement, being a judgement, united in itself elements which are in opposition to each other. The judgement, however, does not assert either the one or the other or both together but only the excluding relation between them which is of such a nature that if one is true, the other is false[5] and *vice versa*.[6] The difficulty, in fact, has been felt because–so Mr. Bhattacharyya contends—almost all thinkers have presupposed that unities can *only* be of the conjunctive type. If the unities were only of the conjunctive type then, obviously, there could be no unities, i.e., conjunctions of incompatible elements. But if the unities can be of types other than the conjunctive then there is, at least, a possibility that even incompatible elements can form a unity.

In fact, Mr. Bhattacharyya contends, the unity formed between a positive and a negative is more intimate than the unity between two positives. He writes, for example, "If on a table an inkpot is absent, and if we say 'the table is without inkpot'", we mean some unity of the table and the *absence of inkpot*. It is much closer unity than when we unify two positive entities. Between two positive entities (except in one case to be presently mentioned) [7] there is always a *factual* relation which cements the relata into a unity. But between a positive and a negative there is no such factual relation felt; the only speakable relation between them is a *predicative* one, i.e. a relation obtaining only in the judgemental description of the whole affair. We say 'The table is without an inkpot', positing thereby a relation inspite of there being no factual relation corresponding to it—factually the relation is but the indentity of the table".[8]

What Mr. Bhattacharyya, perhaps, means to say is that in a positive relationship both the entities are affected in a positive manner and, thus, get modified. But in a relationship between the positive and the negative, the positive remains unmodified; in fact, just itself, while the locus of the negative lies nowhere else except in the positive itself.

Now the elements in a disjunctive judgement are actually related in such a manner. Each of the elements is negatively related to the other, but unlike the ordinary negative judgement, the disjunctive judgement does not *assert* as to which of the elements is to be affirmed or denied. The judgement merely asserts the *alternative exclusion* of each by the other and leaves the question open as to which is to be asserted and which denied. Rather, by its vary nature it suggests that there is no reason to prefer either and, in fact, that *both* are to be asserted but *only* alternatively. The relation between the two elements in the disjunctive judgement, thus, is that the negation of each alternative is predicated of the other. For example, "In 'Either M is N or P is Q' the reality is alternately 'M is N' and 'P is Q' and its very identity is explicated respectively in 'P is not Q' and 'M is not N', 'P' is not 'Q' is in realility nothing but 'M is N', and similarly 'M is not N' is nothing but 'P is Q'".[9]

Thus, in the disjunctive judgement we are faced by a unity (which is as close as it can be) of elements which are incompatible, yet real, though only alternatively. But before we can, on this ground, understand the unity of knowledge and object as a disjunctive unity, we should try to dispose of two serious objections that may arise. The first is that the alternative disjunction belongs only to the indecision in our state of knowledge due to our ignorance about the state of affairs as it is. The reality in itself is not indeterminate but is quite specific. When we say, for example, that "he was born either in 1919 or in 1920", we do not mean that he was alternatively born in both the years. The "Either–or" belongs to our ignorance and not to reality which was only one and not the other—not even alternatively. The other objection relates to the view that in a disjunctive judgement one alternative is necessarily negated on the affirmation of the other. The commonly accepted view is that the disjunctive judgement excludes only the falsity and *not* the truth of both the alternatives contained in it.

The answer of Mr. Bhattacharyya to these objections takes the form of denying the ultimate relevance of the former and questioning the adequacy of the latter. He admits that "ordinary disjunctions involve ignorance", but denies that it is intrinsic to the very nature of disjunction itself. Ordinarily we believe that it is because of our ignorance that we are asserting the disjunctive judgement and that it will be removed in a later stage of experience. But from the *mere* fact that ignorance has been removed in the past in the case of our "Either–or" judgements, it cannot be inferred, without sufficient grounds, that it must be removable in the case of all such judgements. Norman Malcolm has brought out this point in a masterly manner in connection with the complete verifiability of empirical statements.[10]

An irremovable ignorance, however, is ignorance only in a Pickwickian sense. In fact the whole doctrine of ignorance in this case *pre-supposes* the *determinacy* of reality which, unless we have some grounds for believing it in a particular case, cannot be considered as self-evident in its own right. In the case of irremovable ignorance, we can *either* suppose that we are irremediably involved in some metaphysical Māyā *or* that the reality itself is of an indeterminate nature and admits of different formulations. This is, perhaps, the ultimate alternation with which we may be faced in our enquiry about the relations of knowledge and reality. The alternatives, however, are related, as before, in such a way that the affirmation of one involves the negation of the other and *vice versa*. Thus, each is valid but only alternatively.

This brings us to the second objection, that the disjunctive judgement does not exclude the possibility of both the alternatives being true together. It is well known that such a view has been held by most logicians in the past and by almost all in the present. But this view seems, in the main, due to a confusion between what the disjunctive judgement *qua* judgement may be taken to *mean* and the state of affairs as it obtains in reality. As Mr. Bhattacharyya writes : " There is no denying the fact that *both* the alternatives may be, or even are, real; but the question is whether that is *meant* in the disjunctive judgement. That fact *may not be denied*, but non-denial is widely removed from positive assertion. Not to deny does not mean to assert it positively, or even to assert any real possibility of it. *Ratio essendi* and *ratio cognoscendi* ought to be kept apart."[11]

The point is that " we never *mean* ' both ' in a disjunctive judgement *as such* " even if it be a fact that both happen to be true in *rerum natura*. The compatibility or incompatibility of the alternatives is undecided within the disjunctive judgement. It neither affirms nor denies it. In the words of Kalidas Bhattacharyya, " If the alternatives *may be* taken as compatible, equally they *may not*, so that the upshot is pure indeterminacy, which means that the affirmed alternative is *completely indifferent* to the other. "[12]

The alternatives in a disjunction judgement, therefore, are related in such a way that one alternative either cancels out or *rejects* the other or is *entirely indifferent* to it. Which of these relations obtains depends upon the nature of the alternatives concerned. The term " negation ", thus, is used by Mr. Bhattacharyya in a wide sense. As he puts it : " There may be negation either of the *content* or of the *assertion* of the content. Either that other alternative is itself negated or there may be the negation of *stating* that alternative, i.e., no statement at all of that."[13]

The unity of elements in a disjunctive judgement, thus, is an extremely close unity of alternatives which either actively reject each other or are, at least, completely indifferent to each other. In the wider sense of negation, they negate each other and yet form a close unity, for each is related to the negative of the other. The question, therefore, whether we can *intelligibly* conceive of a unity of elements which are in mutual opposition to each other, gets its answer in the affirmative. The unity, in such a case, must be conceived of as a disjunctive unity—and, at least, the disjunctive judgement is no mysterious or unitelligible affair.

The " knowledge situation ", which has seemed so puzzling to most thinkers, can thus be made intelligible if we conceive of it as a disjunctive unity between subject and object. If we look from the side of the object, it proclaims its *complete indifference* to the fact of its being known. The subject, however, rejects the objectivity of the object in becoming aware of itself and in fact, *transforms* the object more and more into the direction of and in the interest of pure Subjectivity which is itself. The transformation that the object successively undergoes at the levels of sensation, perception, inferred object, memory-image and thought is simultaneously both in the direction of and in the interest of subjectivity. There is an increasing rejection of the object at these levels till we reach a stage where the subject rejects the independent objectivity of the object and finds its *essence* within itself or goes a stage further and rejects the object altogether. Thus, the phenomenological analysis of the " Knowledge-situation " reveals that while the subject *actively rejects* the object, the object is *perfectly indifferent* to it– a situation completely intelligible in terms of the relationsip that obtains between the elements of a disjunctive judgement.

However, the relation between elements in disjunctive unities is of such a nature that each can be asserted and is, thus, valid *but only alternatively*. Similar must, therefore, be the situation in the knowledge-relationship. The subject and the object both can be affirmed and are, therefore, valid but only alternatively. The validity of both cannot be asserted simultaneously except in the form of "the verval trite that *there are these two alternatives*".[14] The objectivistic and the subjectivistic philosophies can, therefore, both be constructed and are valid but only alternatively. To say, therefore, that only *one* of them is valid, is wrong. But it would be equally wrong to say that *both* are valid. What can correctly be said is that *each* is valid but *only* alternatively. "The only standpoint from which both can be spoken of as real is that of the *verbal* super-philosophic conjunction corresponding to the transdisjunctive togethering of the alternatives."[15] The subjectivistic and the objectivistic philosophies are, thus, valid alternative constructions from the "Knowledge-situation" which is of such a nature as to permit or rather require both, but only in such a way that the validity of the one negates the validity of the other and *vice versa*.

Among the Subjectivistic philosophies which all involve the rejection of the object, Mr. Bhattacharyya, however, makes a distinction. The rejection of the object through which the subjectivity comes to be aware of itself, may be conceived to be a necessary step as, for example, in the system of Hegel. The subject returns to itself by negating the object and grows richer by this negation. The object, thus, gets a type of non-being with which the subject forms a dialectical unity and grows richer and concrete just through this unity. But the object may be rejected altogether, i.e., even the first-level rejection itself may be rejected. This, it should be noted, does not posit the object once more but rejects it even in its character of non-being.[16] What remains, then, is pure Subjectivity without any distinctions and without any 'other' to itself. This is the position of Śaṁkara and though Hegel has characterised it as 'abstract idealism'. Mr. Bhattacharyya shows in detail that there is no reason to prefer one view as a more intelligible account of the "Knowledge situation" than the other. If we characterise Hegel's solution of dialectical unity as absolutism, than there is a disjunctive alternation between Subjectivism, Objectivism and Absolutism. Each construction is valid, but only alternatively.

If Mr. Bhattacharyya would have stopped with this formulation alone even then he would have said something so original that a serious consideration of his view would have been incumbent on any thinker who was not hampered by the style of his presentation or prejudiced against the geographical location of the philosopher concerned.[17] But he goes even further and tries to show that the three alternatives are not mere theoretic logical conceptions but actually obtain in our experiential life. " Mere logical establishment of a doctrine ", he writes, " is never convincing until it is confirmed by psychological appeal to immediate apprehension. In the absence of such direct psychological appeal much of the traditional philosophy has been useless logomachy, a hair-splitting that has come to nothing substantial."[18]

He, therefore, undertakes an analysis of experience in its cognitive, affective and conative aspects and tries to test his theoretical formulations on the basis of such an analysis. The result is an extremely original and challenging analysis of cognition, feeling and conation which is sometimes so bold and unorthodox that one is left wondering at the author who could have the daring even to think such things. However, often one feels the impulse to dismiss the author as utterly confuses—and one feels it rather too often—one always returns, if one continues to read, to the conviction that there is some solid ground for what the author is saying and that it was only the novelty of the idea that had made one feel that he was confused.

The analysis, it should be noted, is undertaken for the confirmation or rejection of the theory of knowledge eleborated in the last section. In fact, while trying to understand the " Knowledge-situation ", we were trying to understand the relation between subjectivity and object. But as subjectivity and object are involved in all experience, the relationship postulated between them by the theory of alternation, if true, must throw light on other aspects of experience as well. The analysis, therefore, aims at discovering " the exact subjectivity and the exact object " in each of the psychical processes and the relationship that obtains between them. The results reveal that there is a " correspondence between cognition, feeling and conation, on the one hand, and the subjective, the objective, and the dialectical attitudes, on the other."[19]

However surprising it may seem, that cognition, at its different levels, moves *towards* Pure Subjectivity and involves an increasing rejection of the object, Mr. Bhattacharyya contends that it is such. The movement from sensation to perception, memory and thought is, in his opinion, simultaneously an increasing dominance of Subjectivity and an increasing rejection of the objectivity of the object. Of Course, the reference to object, even at the highest level, does not cease. But the direction of the movement, he suggests, is fairly clear. The view may perhaps become more intelligible if we reflect that even in sciences, when there grows up an increasing theoretic complexity and an increasing distance from ultimate empirical correlation, one begins to feel the receding of the object till it is reduced to mere "pointer-readings" or the reception of visual or auditary signals. The object seems to grow more and more shadowy while the creative aspect of the Subjectivity comes more and more into focus. The philosophers reflecting on cognition have, again and again, felt it difficult to find that bere object which is bereft of any subjective construction altogether. The scientists, on their part, have equally reduced the object to a complex theoretic construct in which the *overwhelming* character of the objectivity of sense-percepts is reduced to its ghostly minimum. The attempt to deduce the whole set of physical phenomena from certain ultimate postulates, called "postulates of impotence" is another pointer in the same direction. The dream or the ideal has always been to weave the whole web of knowledge out of the self-evident necessity of thought. The deductive form that the advanced sciences seem inevitably to take suggests that there is some imperative behind the dream which, even if intrinsically unrealisable, sets up a goal towards which we can perhaps asymptotically approach. There seems, thus, some ground for Mr. Bhattachayya's assertion that the movement of cognition is towards pure subjectivity, though the reference to the object is never completely lacking even at the highest level.

Equally, surprising, at first sight, is his contention that feeling eads us towards objectivity. So obvious does it seem to most persons that feeling is purely subjective that it would come as a shock to find any one seriously contending that it is not such. However difficult it may be to conceive this at the level of pleasure-pain, it becomes increasingly clear at the succeding levels of emotion, aesthetic creation and aesthetic appreciation. It may, perhaps, make the situation more intelligible if we disabuse our minds of the usual notion that only perceptual objects are objects. The *overwhelming* character of objectivity that belongs to perceptual objects belongs even more so to pleasure or pain. We are completely immersed in them and do not, in most cases, stand back from them. Such a situation obtains at the perceptual level also though even there, in a sense, the subjectivity may be said to be standing back from the object and confronting it. But on the higher levels of emotion, aesthetic creation and aesthetic appreciation the differences are clearly revealed. There is an increasing domination of the object and the absorption of the subject into the Object. The reference to the subject never completely ceases but it receds more and more in the background till it remains almost a mere background.

Whatever be the different theories of aesthetic appreciation, there is a fair amount of common agreement about one thing at least, viz., that we are interested in aesthetic appreciation in the object 'for itself', and 'in itself'. This, if we examine, is just the character of pure objectivity. In fact, there is just this difference between ordinary perception and aesthetic appreciation. Unlike the theoretic transformations that the perceptual object undergoes at different cognitive levels, its objectivity merely gets more deepened at the highest level of aesthetic appreciation. In fact, if we reflect on the constructional character of scientific objects and the concrete character of the objects of aesthetic appreciation, it would perhaps be easier to understand what Mr. Bhattacharyya is saying. There is, at least, hardly any *rejection* of the object in the aesthetic situation and, thus, on a prima facie view, it should be considered to belong more to the objectivity side of the previous analysis. Most writers on Aesthetics have noted the fact of depersonalisation both of pleasure and pain in aesthetic creation and appreciation, a fact that supports the contention of Mr. Bhattacharyya.

If, then, cognition belongs to the Subjective and feeling to the Objective attitudes, it is natural to except that conation belongs to the third, i.e., the dialectical attitude. Dialectical unity, if we remember, involved the negating of the object and, through this negation, the returning of the Self to itself. The object had a kind of being (for it was not mere Nothing) and its being consisted just in this that it was negated by the subject. Conation reveals just these characteristics at the levels of (1) instinctive and other unreflective activities, (2) ordinary voluntary will and (3) moral will (i.e.), willing the good.[20] It is the very character of conation to negate an exixting state of affairs. But such a negation necessarily presupposes the actuality of the state of affairs to be negated. At the highest level of the moral will, such a characteristic is clearly revealed. Further, the negation involved makes the subject richer and more concrete and is, thus, necessary to its very being. It is a well-known problem of morality that, if things were as they ought-to-have-been, there would be no place for morality. Morality, thus, presupposes a non-valuational or disvaluational state of affairs in the negation of which the necessary reality or worth of the self lies. But if even this stage is to be negated then the self returns into itself, and we move in the direction of Pure Subjectivity, a direction which would seem both abstract and immoral to the dialectical philosopher.

Conation, Cognition and Feeling, thus, seem to involve in themselves movements towards Ideals which are increasingly, though never completely, realised at different levels. The claims of Pure Subjectivity, Pure Objectivity and the Absolute are felt and a movement made towards them at different levels. But if the logic of alternation has given us any insight, then the relations between these ideals must also be of an alternative character. The relation between Pure Subjectivity (cognition) and the Absolute (conation) on the one side and Pure Objectivity (Feeling), on the other, should on the logic of alternation, be that while the former *reject* the latter, the latter is completely indifferent to the former. The relation between Subjectivity and Absolute, however, should be of such a nature that each can admit the other only as a subordinate movement within itself. The moment the other tries to dominate, it has to be rejected. The movement towards pure Subjectivity admits the first negation involved in the dialectical attitude, but the moment it tries to stop there, it has to be rejected. Similarly, the dialectical attitude can tolerate the Subjective as an abstraction, but if it refuses to move out of this abstraction, it has to be rejected. Each, thus, can tolerate the other as a subordinate movement but has to reject it when it claims to be the dominant one.

Such, in brief, is the tentative exposition of Kalidas Bhattacharyya's thought as delineated in his *Alternative Standpoints in Philosophy*. Many of the points he has made may be understood better if seen in the light of his father's philosophy. But K. C. Bhattacharyya's philosophical writings are filled with such obscure profundity as to vie with Hegel and Heidegger in this respect. Further, his writings were not available to the early students of Kalidas's work, and they could not have placed it in its proper context even if they had desired to do so.[21] Even now when K. C. Bhattacharyya's work has been available in a compact form for more than a decade, few persons have paid it the sustained attention which alone could render it intelligible to students of Philosophy in the country.[22] A critical appraisal must await adequate comprehension of the thought of these two major philosophers of modern India. The present essay, hopefully, is a step in this direction.

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NOTES

1. Kalidas Bhattacharyya : Alternative Standpoints in Philosophy. Calcutta, Das Gupta & Co. 1953.

2. The significance of this word would become clear in the further course of this exposition.

3. Normally, the compatibility or incompatibility is supposed to be between propositions and not " things ". However, in the context of Prof. Bhattacharyya's thought, the latter usage is more meaningful as would appear from the sequel.

4. The fashionable solution preferred at the present time would, perhaps, be that it is all a linguistic confusion. It is generally forgotten that, in a sense, all confusions can be considered to be linguistic – for, in reality (whatever that word may mean), there can hardly be any confusions. But supposing reality, i. e., the object of our linguistic statements, is itself indeterminate, i. e., of such a nature as to make conflicting statements possible. Is the *order* then linguistic or the confusion ? What are the grounds of our belief either way ? Mr. Bhattacharyya has thoroughly discussed these possibilities which are not even dreamt of by the logical positivists of to-day.

5. The word "false" is too strong for a correct characterisation of Bhattacharyya's position. A more adequate statement would follow later.

6. We are quite aware (and so is Bhattacharyya) that this is not agreed to by any modern logician. We would give later his reasons for his differences on this matter.

7. The case excepted is the inherence of a quality in that to which it belongs.

8. Alternative Standpoints is Philosophy p. 11. Italics author's.

9. Kalidas Bhattacharyya, ibid p. 152. It should be noted that according to Mr. Bhattacharyya, the disjunctive judgement is better symbolised by "Either M is N or P is Q" than by "Either M is N or Q". For, the latter can mislead one to suppose that "M" is the subject of the disjunctive judgement while the former can never do so. In fact, it is only when the former is analysed that we find that in it each clause is alternatively the subject and the negation of the other, the predicate. Further, while the latter can be translated into the former, the former cannot be reduced into the form of the latter. We can say "Either M is N or M is Q" but there is no way of putting "Either M is N or P is Q" into the form "Either M is N or Q."

10. "The Verification Argument" in Philosophical Analysis Ed. by Max Black. Prentice Hall, Englewood Cliffs, N. J. 1950.

11. Op. cit p. 156. Italics author's.

12. Ibid. p. 158. Italics author's.

13. Ibid· p. 158. Italics author's.

14. Ibid. p. 153. Italics author's.

15. Ibid. p. 159. Italics author's.

16. The denial of the denial, therefore, does not here result in an affirmation but in an absolute negation. Reasons for holding this view are given in detail in the work concerned.

17. The reference to geographical location may surprise some readers, but it is a fact that it is not only Westerners who believe that no meaningful philosophical activity could occur outside the western hemisphere but Indians also.

18. Op. Cit. p. V. Italics author's.

19. Ibid. p. 208.

20. Ibid. p. 257.

21. This paper is a slightly amended version of something that was written long time back. It thus also suffers from the limitation, as the only work of K. C. Bhattacharyya which was then available was *Subject as Freedom.*

22. N. V. Banerjee's monograph on K. C. Bhattacharyya's *The concept of Philosophy* published from Calcutta University and K. T. Kadankavil's *The Philosophy of the Absolute* published from Bangalore (1972) are notable exceptions to this but, as everybody knows, even two swallows do not make a summery.

SOME THEORETICAL COMMENTS ON D. D. KOSAMBI'S THE CULTURE AND CIVILIZATION OF ANCIENT INDIA

D. D. Kosambi's '*The Culture and Civilization of Ancient India*'[1] is a many faceted work, which invites a similar multi-levelled approach. The most immediate and perhaps the most natural response to it would be to focus attention upon its new and stimulatingly fresh reconstructions of some aspects of the past of India. For example, Kosambi's description of the Indus Valley Culture and his discussion of the early Aryan settlements are likely to provoke the interest and comment of the professional historian, while his analysis of the historical functions of the Brahmin caste as the stabilizing agent of the Hindu society would be of interest to the sociologist. Similarly, his account of the structures and forms of Indian tribal life as well as its persistence into the historical Hindu society would, I am sure, be welcomed by the anthropologist; indeed, it appears to me that this is one of the most interesting and important of Kosambi's contributions 'the little cultures' as Lannoy[2] calls them, of the Indian tribes and their impact upon the culture of the larger society has too often been lamentably ignored by historians and hence Kosambi's work in this area of historical studies needs particularly to be welcomed. The only other work in which such tribal influence is stressed that I know of is Richard Lannoy's '*The Speaking Tree*'. Comparing Kosambi and Lannoy, for the moment, one finds that while Kosambi, in the main, sees this influence as an inhibiting and retarding factor, in Lannoy, we have an emphasis placed upon the fact that at certain historical junctures tribal life has provided a counter culture to the greater culture of the larger society and how this availability of an alternative model of life has been culturally significant. Lannoy's discussion of the influence of tribal customs and values upon Ajanta art is a fine example of this.

But at a more abstract and theoretical level, Kosambi is also concerned with the question of the formation of the Hindu psychological type and temparament; he, at various places in his narrative, seeks to reveal the forces that have shaped the social character of the Hindu and in two places particularly this interest in what may be called historical social anthropology, comes to the force. The first is his discussion of the two contrasting psychological types of Buddha and Krishna, ' the dark hero of the Yadus', as two contrasting psychological responses to social reality and the second context in which this anthropological interest becomes manifest is the concluding discussion of the influence of Sanskrit literature in shaping the Hindu character. However one might disagree with the details of this character forming proccess the task itself is of undeniably great importance. As Erich Fromm has recently remarked, this is a much needed complement to Marxist sociological analysis of culture history for in the shaping of the social character, psychological, sociological and historical investigations have to be properly balanced. And indeed for the culture historian of India, this is specially important for, as Kosambi remarks, the most emphatic feature of Indian cultural history is its enormous stability and I suggest that this stability, in the final analysis, is to be based upon the stability of the social personality of the Hindu. If so, it would appear that an account and explanation of the formation of such a personality—type would be one of the prime tasks of the culture historian and hence Kosambi's book deserves to be welcomed in this respect also.

But precisely a recognition of the importance of the psychological dimension makes one somewhat unhappy with the details of the portrait as emphasized by Kosambi. For example, consider his explanation of the historical attitude of the Hindu mentality. " Not only caste but the emphasis upon religion and the total lack of historical sense have to be explained. The last is rather simple and is bound up with rural production and ' the idiocy of village life '..The four yugas, periodic ages of mankind that remain in Indian myth, reflect the four major changes of season accurately. They are supposed to end with a universal deluge, after which the cycle begins again. This is what happens in the country side after every mansoon ".[3] Again, he constantly under-estimates the psychological impact of philosophical and abstract speculation. While one may not take seriously the naire, popular view that the Hindu temperament and character has been shaped by religion and high philosophy, yet a cultural historian can hardly ignore the latent functions of these religious and philosophical ideologies.

In a country where ideological productions have had such an immense vogue (consider for example, the great prestige attached to Vedic and Sanskrit studies), the subtle influence of even the structure of language upon the psychological structure of the people becomes crucial. The psychological valence of Vedic, Dharmic and Vedantic traditions, the way such concepts have structured the typical Hindu character and its stability—these are some of the interesting tasks yet to be done, but Kosambi's general marxist orientation makes him somewhat impatient with ideological analysis. This is a pity and a misfortune for the task of the analysis of the Hindu character must, in the main, be in terms of such an ideological analysis. I would even suggest that the very structure of the language be considered as crucial determinant of the structure of the Hindu type and in this connection, the neglect to probe the dharma śāstras and philosophic treatise from such a structuralist view point is a serious lacuna in Kosambi's work.

But even more important than the historical analysis of the generation of the Hindu personality is the task of giving a socio-cultural analysis of historical change. Kosambi, as he himself tells us, does not seek to write a history of India in the sense of a chronicle of political events and vicissitudes. His reasons for this are both methodological and substantive. He notes, as a technical historian that even the minimum necessary equipment for this in the form of authentic annals and records are lacking in the case of India. Whether this is so or not is a matter for the professional historian to decide. But Kosambi has other substantive reasons also for this neglect of episodic history, namely that such a merely political narrative of kings and their exploits and conquests hardly illumines the processes of socio-cultural change and in this, no doubt, he is right. If a socio-cultural history of India is at all possible, it must be in terms of cultural and social rather than 'political' forces and tendencies.

But is such a cultural history of India possible ? To this, Kosambi seems to have two kinds of answer. Regarding the necessary data for such a socio-cultural history of India, he writes 'the country has a tremendous advantage that was not utilised untill recently by the historians : the survival within different social layers of many forms that allow the reconstruction of totally diverse earlier stages'.[4] In other words, Kosambi holds that one can reconstruct the social and cultural past of the country from the present social structure of rural and tribal India, and that in this sense, the data of such a history are the contemporary facts themselves, regarded as survivals of earlier forms. I am afraid this claim is likely to make a sensitive sociologist or anthropologist shudder for even in the case of simple preliterate tribes, such a procedure of conjectural history has long since been abandoned as unreliable. If even a simple, non-literate tribe as it lives at present is no reliable clue to its earlier forms of existence, then the task of reconstructing the complex socio-cultural past of an ideologically highly sophisticated country on the basis of rural and tribal survivals is not likely to succeed.

But Kosambi has really another and better justification and warrant for his task, and it is here that his theoretical framework enters into the picture. Kosambi's history is no mere chronicle or narrative, he does not tell everything as it actually happended. Rather, his history is an interpreted history, an account of social and cultural change seen in terms of a theory. Unlike a mere political or military chronicle, social history cannot be unfolded in the form of a mere narrative, for socio-cultural phenomena are too complex to be readily described in terms of a mere narrative sequence. Even to describe the forms and structures of social groupings we require theoretical typologies and to describe their change and development, we need some theoretical model which would enable us to identify the dynamic factors responsible for such a change and Kosambi's work indeed has such a theoretical perspective; he himself recognises the need for such a theoretical sub-structure when he remarks that he hopes that his history would illustrate not merely India's past, but also her present. Quoting E. H. Carr, Kosambi writes; ' The function of the historian is neither to love the past, nor to emancipate himself from the past, but to master and understand it as the key to the understanding of the present. Great history is written precisely when the historian's vision of the past is illuminated by insight into the problems of the present. Learning from history is nerver simply a one-way process. To learn about the present in the light of the past also means to learn about the past in the light of the present. The function of history is to promote a profounder understanding of both past and present through this inter-relation between them."[5]

It is precisely this 'inter relation between past and present' that is lacking in any merely sequential narrative and which a theory can give. So, if history is to have this function of reciprocal illumination of the past by the present and of the present by the past, then such a history must be mediated by a theory; all the more so, if the history claims to be a cultural history as well. Hence, the question whether a socio-cultural history of India is possible is transformed into the question whether we have, according to him, a viable theory of socio-cultural change.

But before I take up the question as thus formulated, I wish to comment briefly upon the very idea of a theory in history for there is likely to be some resistance to the notion of a historical theory itself. To start with, I do not mean by a theory in history such speculative philosophies of history as we find in Spengler, Toynbee or even in Vulgar Marxism. Such speculative constructions of the historical imagination, I would prefer to call historical eschatologies rather than historical theory. It is evident that Kosambi also has no use for such eschatological schemes. For example, while talking of the specific complexities and peculiarities of Indian history, he remarks, 'our position has also to be very far from a mechanical determinism, particularly in dealing with India, where form is given the utmost importance, while content is ignored. Economic determinism will not do'.[6] In passing, I think there is a serious misunderstanding of a genuinely marxist understanding of history here, as well as some confusion about the concept of historical determinism. To hold that a marxist analysis is not possible where apparently formal considerations prevail over material factors is seriously to restrict the thrust of the marxist theory, which the mere existence of a number of marxist studies of form in aesthetics is enough to refute. Furthermore, the determinism of such a theory is wrongly understood if it is to be taken as a simple fatalistic pre-determination. But what is interesting about the above remark is that Kosambi here implicitly rejects any simple minded marxist eschatology which holds the coming of socialism and the class-less society to be the mysterious indwelling telos of the whole historical process. If by historical theory we do not mean such speculative philosophical schemes, neither do we mean by 'theory', any general law-like proposition or set of propositions from which predictions of future events can be deduced; in other words, a theory in history does not function like a theory in the natural sciences. There is currently going on a huge debate among philosophers of history whether historical explanation is sui generis and distinctive or whether it can be brought under a general theory or model of explanation which would be applicable to the natural sciences as well. Hempel has held that historical explanation has basically the same structure and function as explanation in the other sciences, while Dray, Scriven and Danto have urged the peculiarities of historical explanation. But even if historical explanation in the Hempelian manner should be possible, it must be obvious that the premises or laws from which predictions would be derived would not be historical laws; so, even if historical explanations are of the Hempelian type, there would be theories involved in such explanations, but these need not be historical theories. I do not think there are historical laws; there might be statements of historical trends, but as Popper remarks, a trend is not a law. So, by theory in history, I do not mean a set of propositions of law-like form, which would serve as a basis for predictions. A theory in history, as I see it, functions more as a model or a conceptual scheme of orientation which serves to identify the type and form of a social grouping and which also allows us to distinguish between factors which initiate change and those which transmit or adapt to such changes. A theory, in short, functions as a model and hence the question about the possibility of a social and cultural history is, at bottom, a question as to which model is most useful in the analytical study of socio-cultural phenomena.

But, unfortunately, too often the logical function of a model is misunderstood and it is treated as if it is a discription of socio-cultural facts. Understood in this way, of course, a model is too poor, too gross in its over simplifications and hence an attempt is made to pile on facts and descriptions of events to the model in a vain attempt to overcome its factual poverty. But this strategy, I feel, is wrong in principle and can only result in conceptual chaos. For the model and an empirical account belong to logically different types; a model does not aim to be an approximation to a narrative account; rather, it serves to organise such accounts in terms of a conceptual theme. Hence any attempt to add new facts to a given model with the idea of thereby making that model more realistic and life-like will only succeed in destroying whatever powers of theoretical illumination the model originally possessed. But, then, it may be asked, seeing that every model is partial and selective, how do we improve our models if not by adding facts to the theoretical scheme ? One way would be to use complementary models. Consider for example, the analysis and theoretical understanding of a historical event. Since the event or action in question is a response to certain objective situations and allignments of forces and in turn itself leads to further consequences of an objective sort, we might use a scheme which would be cast in terms of such objective factors, forces and trends. At the same time, since historical action is the manifestation of a human agent's cognitive identifications, purposes and plans, we might also consider the agent's conceptualization of the situation as an explanatory model. In short, we might use outsider and insider models as two complementary ways of making sense of the situation; but in so using a dual model we should take care not to reduce the one to the other. Thus, while working out the logic of the situation, we cannot treat the agents' desires and purposes as mere epiphenomena reducible to objective factors. A congnitive identification is a selection and hence cannot be explained away on the basis of merely objective factors. To do so would be to court the fallacy of naive determinism which Kosambi rightly rejects.

But the method of complementarity leaves us with the question of irreducible duality. Seeing that the one cannot be reduced to the other, should we, in fact, be condemned to shifting back and forth between the two, with no hope of a unifying focus ? Is there no possibility of integration of the objective and subjective models of historical understanding ? Before we come to this, let me remark that Kosambi does use both types of historical understanding. As an example of the first type of objective or 'ethic' explanation, I might mention his analysis of the sociocultural facts responsible for the rise of Buddhism and as an example of the second or 'emic' type of analysis might be mentioned his analysis of the changes in social and cultural life brought about by Asoka's conversion. But there is a danger in the method of complementary models : either one falls victim to the temptation of naive reductionism or one merely juxtaposes the two points of view shifting suddenly from the one to the other. As an example of naive reductionism, I have already cited Kosambi's suggestion that the historical termperament of the Hindu could be explained in terms of the Indian climate. A second but less gross example of an attempt to rudece subjective ideology to objective social conditions is his claim that the Eight fold path of the Buddha is the most social of all religious. Now, I am not denying that Buddhism has had a complex social content, but, as recent scholars like Melford Spiro have shown, the relations between Buddhism and society is a complex issue of many types of factors and any attempt to view the ideology of the Buddha as merely a response to a social crisis, is, to say the least, simplistic. Here again one regrets the absence of ideological analysis in Kosambi's work. In order to make any progress at all in the understanding of the relationship between an ideology and the social reality, a simple model of stimulus and response will not do; rather, one must use Merton's concept of 'latent functions'; one must be sensitive to the many subtle ways in which an ideology reflects as well as distorts social reality and for this again, one must be sensitive to the structure of the ideology itself. This means, as I said earlier, a preparedness to work out the sociology of knowledge concerning the particular religious or philosophical doctrine. Such a sociology of religion is far removed from any mere socialization of religion; by the latter, I mean the attempt to view religion as a kind of mere ideological response to a social crisis. This lack of a sociology or religion in Kosambi's work is more seriously felt in his treatment of Vedantic philosophies, especially that of Sankara. In the few lines that he devotes to Sankara, one gets the impression that the philosophic edifice is a mere reflection of social decay. But this diagnosis violates the autonomy of thought and ultimately ruins the social analysis itself, for, unless one is prepared to work out the actual structure of a philosophy in its own turn, unless one first undertakes a conceptual and philosophical analysis of a system of thought, one cannot eventually answer the question as to how the system has actually functioned. In ideological analysis, one cannot understand form without understanding meaning and it is precisely this distaste for a conceptual analysis of the super structures that spoils Kosambi's attempt. Of course, in a way Kosambi himself is aware of the importance of ideological or super-structural elements in Indian history. His remarks upon the importance of form over content is an oblique way of recognising this, while his concluding discussion of Sanskrit poetics is a more direct recognition of it. But if ideological elements are so important, as they obviously are in the case of Indian history then the proper course would be to undertake an analysis of such superstructural elements. Such an analysis would have to focus upon the structure, meaning and logical form of the philosophies concerned; it will have to probe the manifest and latent contents of the doctrine and the resulting tensions as well as the gross and subtle ways in which such structures have shaped the cognitive worlds of man. But owing to a personal distaste perhaps for such super-structural analysis, Kosambi does not embark upon any such procedure, with the result that the realism of the picture as well as the viability of the theoretical ground .plan is endangered. Regarding the first danger of loss of realism, it is surprising to find that Kosambi has almost next to nothing to say regarding the impact of Manu's dharma shastra upon the formation of the Hindu society; at a more abstract level, there is hardly any attempt at tracing out the manifold ways in which the philosophical and theological traditions of India have shaped Hindu character and temperament. As just one instance of this lack of sensitivity in ideological analysis, I might mention his view that the rival interpretations of the Gita had hardly anything to do with social reality. But the lack of realism consequent upon a neglect of super-structural analysis is only a minor result of it; a more serious danger is the invalidation of the theory itself. A recognition of the importance of ideological elements coupled with a neglect of their analysis develops a certain tension between the demands of the theory and the actualities of the situation. In this tension, a historian is particularly likely, because of his basic commitment to actualities, to introduce empirical flesh to the outlines of the theory, hoping thereby to overcome the inadequacies of the latter. But, as we have seen, this only makes matters worse. Or alternatively, he might begin to invoked other models and other theories, hoping that such theoretical pluralism would suffice. But as our discussion of the method of complementary models suggests, the question of unifying the different perspectives, of integrating the various models, still remains. Theoretical pluralism may be the immediate response but it cannot be the final stand of the culture historian. By this, I am not suggesting that the historian must opt for a single theory and ignore the others; I am rather saying that there is need for a general theory which could take into account the different perspectives of the different models.

But for the immediate context, I want to show the presence and operation of a diverse set of models in Kosambi's work. The model or theory in the foreground of his work seems to be a loose variant of the Marxist scheme. His very definition of history suggests this, for he defines history as, 'the presentation in chronological order of successive changes in the means and relations of production.'[7] In passing, it may be remarked that if taken literally, such a definition would reduce history to merely the history of technology, but it is only fair to add that history also deals with forms and changes in other spheres of culture insofar as they are consequent upon changes in the means and relations of production. Indeed, such an addition or enlargement is necessary for there is very little of purely technological detail in Kosambi's history. Throughout he is dealing with forms of social life dependent upon certain modes of productive relationships. I said that the dominant model in Kosambi's work is a loose variant of the Marxian scheme; that it is Marxist is obvious at more than one place. I shall content myself with only indicating two such contexts. First of all his definition of commodity production and secondly and more importantly Kosambi uses the Marxist typology of forms of society and especially that of Asiatic or oriental despotism. His picturization of the social form of the Artha shastra is a particularly fine example of this society, where the state functions as the biggest producer of commodity. But I also suggest that this seems to be a loose variant of the marxist scheme. First of all, to take up relatively less important details; consider the definition of history given by him. 'History is the presentation in chronological order of successive changes in the means and relations of production.' This definition seems to identify the means of production with the relations of production, but in another context, he seems to identify the relations of production with the 'forms of society'. He writes, 'surplus production depends upon the techniques and instruments used—the means of production. The method by which the surplus passes into the hands of the ultimate consumer is determined by and in turn determines the form of society—'the relations of production'.[8] I must confess that I find this very confusing. The techniques and instruments of production are identified with the 'means of production', for which there is warrant in Marxist usage, but the relations of production seems to be identified with the form of society. I suppose this refers to social structure and cultural context. If so, I do not think that this accords with marxist usage. In fact, Kosambi's 'relations of production' would be a super structural element in the Marxian model. But in between the means of production and the relations of production, there occurs an unidentified element 'the method by which the surplus passes into the hands of the ultimate consumer.' I suggest that this appropriation of the surplus by the ultimate consumer is what Marx meant by the economic organisation of the society, which he called 'relations of production'. The difference between Kosambi's model and that of Marx can easily be seen if we set it by the side of Marx's own words : 'In the social production which men carry on, they enter into definite relations that are indispensible and independent of their will : these relations of production correspond to a definite stage of development of the material forces of production. The sum total of these relations of production constitute the economic structure of society the real foundation on which raises a legal and political superstructure and to which correspond definite forms of social consciousness. The mode of production in material life determines the social political and intellectual life processes in general. At a certain stage of their development, the material forces of production in society come into conflict with the existing relations of production, or what is but a legal expression for the same thing—with the property relations. Then begins the epoch of social revolutions. With the change in the economic foundation, the entire immense super structure is more or less rapidly transformed'.[9]

From the above, it appears that Kosambi's model differs from that of Marx regarding the crucial role of the relations of production. If 'relations of production' are identified with the form of society, then, in Kosambi, relations of production belong to the super structure, whereas in Marx, they form part of the economic sub-structure of society. This is no mere theoretical quibbling for the above passage from Kosambi goes on to suggest that the method by which the surplus is appropriated by the consumer is determined by the form of the society. If now, the method of appropriation is what is meant by the economic structure of society, this would mean that economic structure is determined by ideology. Of course Marx and Engels themselves admit a reciprocal determination between basis and super-structure, but in their writings, these two kinds of determination are clearly distinguished, whereas in Kosambi, there is no such analytical distinction between the various senses of 'determination'. If 'determination' were to be taken in a univocal sense, it would appear that what Kosambi says would amount to an actual subversion of the marxist model.

Furthermore in the passage from Marx, there is struck the note of class conflict as the prime mover of structural transformation. Conflict is the main spring of Marxian social dynamics, whereas in Kosambi, there is no such clear identification of a dynamic factor; he merely speaks of successive changes in the means and relations of production. But if we wish to identify the dynamic factor in Kosambi's model of change, we have to look to another context and surprisingly enough, it turns out to be population growth. He thus writes, 'Any important advance in the means of production immediately leads to a great increase in population which necessarily means different relations of production'.[10] Remembering that Kosambi indentified relations of production with the form of society, several remarks about this have to be made. It is first of all, doubtful whether increase in technological efficiency necessarily leads to an increase in population. Similarly the claim that increases in population necessarily lead to different social forms may be questioned. In terms of his own study, it is hardly possible to have a greater contrast between pre-Asokan and Asokan forms of socio-political organisation, but, to say the least, it is hardly possible that the population of India underwent any drastic transformation in the brief period of Asoka's Kalinga campaign. Anyway, the theoretically important point is that Kosambi's dynamic factor, namely population differentials, hardly emphasizes the predominance of conflict, whereas Marx's model is a paradigm of conflict theory. Perhaps, this is the deeper reason why conflict figures so little in Kosambi's account of socio-cultural change.

If the demographic factor is the first addition to the marxist ground plan, Kosambi also adds a second one in the form of political control and domination. In his extremely interesting account of society of the Artha sastra period, he brings out the supremacy of the political factor very well, as well as in his account of the Asokan reforms. The third practical addition is the psychological factor as exemplified by his portrayal of the rise of Buddhism, and Asoka's gentle humanism and the psychological rise to power of the Krishna cult. In all these discussions, he is emphasizing the importance and dynamic relevance of psychic states of feeling, new desires and attitudes. Other additions to the model follow swiftly and it is enough to merely record them. There is the ecological emphasis upon adaptation to the environment, the influence of foreign acculturation especially regarding contemporary India and the ' lethargy and idiocy of village life '. At a pinch Kosambi even throws tribal survivals into the bag, with the result that the firm-out-lines of a promising theory of socio-cultural change get blured as further and further empirical phenomena from disparate contexts are heaped on. This is a pity and a misfortune for we finally are left with astonishingly sensitive book in searh of a theory.

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PARADOXICAL TRUTH CONDITION OF MATERIAL IMPLICATION

I

In the following pages I shall reconsider the familiar problem that has arisen out of identification or alleged identification of material implication with the relation of inferribility. My purpose is to reach some clarification of the problem[1] and, if possible, some solution without abandoning the policy of not admitting any non-truth-functional concept.[2]

Russell has said that the theory of (material) implication is " the theory of how one proposition can be inferred from another."[3] Thus he evidently and consciously identifies the relation of material implication with the relation of inferribility. And here the critics hold that this identification leads to paradoxical results in view of the definition of material implication viz $p \supset q = \text{df.} \sim pvq$. And on this ground the critics hold that material implication has no serious claim to the name implication, that it provides no proper account of the relation of inferribility.

Doctrine of material implication is often sought to be defended against this charge by pointing out that this is a techincal notion which has effected tremendous convenience, that paradoxes are the truths of the system, that there are no paradoxes at all and so on. But it is still held " by a small but persistent group of logicians that the Standard Logic criterion of validity is too permissive as a test of correctness in the intuitive sense."[4]

I shall first show the necessity for including, as part of the meaning of material implication, the notorious paradoxical truth condition. Unless we can convince the critics of such necessity they cannot be pursuaded to accept the notion simply on the ground that paradoxes are harmless. For paradoxes, even if harmless, should not be admitted into a system if they are avoidable.

II

Any adequate theory of inference must provide room for distinguishing genuine inferences from what is not genuine inference. In addition to this every adequate theory of inference must provide room for distinguishing, within the class of genuine inferences, one inference from another. In other words ability to distinguish different inferences is one of the criteria of adequacy for any theory of inference.

To begin with, there is an intuitive difference between inferring q from p and inferring p from q; that is to say, it is intuitively clear that logically correct inference of q from p is different from logically correct inference of p from q. This intuition is reflected in the formal system by the fact that law of commutation is not admitted to hold of implication though it holds of such other binary connectives as conjunction, disjunction or equivalence. Any way there are different inferences like inference of q from p, inference of p from q, inference of $\sim$p from $\sim$q and so on.

Intuitive non-reversibility of inferential relation or non-derivability of '$p \supset q = q \supset p$', (or even '$(p \supset q) \supset (q \supset p)$') as a theorem in a system like PM takes the inference of q from p to be different from the inference of p from q. But how to distinguish them within the limits of a truth functional logic ? We must admit that there may hold a relation between p and q on the basis of which q can be validly inferred from p, but p cannot be validly inferred from q. Since the relation which permits q to be validly deduced from p is the inferential relation, the latter should be such that when it obtains between p, and q, q can be validly deduced from p, and not p from q. Thus if inference of q from p is to be distinguished from the inference of p from q we must so characterize the inferential relation as to make it non-reversible. And we think the doctrine of material implication has succeeded in doing this.

Thus suppose we take the expression 'p materially implies q' to be synonymous with the expression 'q is validly deducible from p', we can reformulate our question thus : How 'p materially implies q' be distinguished from 'q materially implies p' ? Here again the distinction we demand is not any sort of intentional or just typographical distinction. To be able to distinguish in the sense required it will have to be shown that '$p \supset q$' may be true but '$q \supset p$' may be false. That is there should be at least one condition under which '$p \supset q$' becomes true *and* 'q implies p' becomes false. In other words at least one of the truth conditions of ‘ $p \supset q$ ’ must *at the same time* be the falsity condition of ‘ $q \supset p$ ’. Now the conditions TT and FF are the common truth conditions of both ‘ $p \supset q$ ’ and ‘ $q \supset p$ ’. Therefore the only way of distinguishing the two inferences is to admit among the truth conditions of ‘ $p \supset q$ ’, the condition FT.[5] And this condition is alleged to be the paradoxical truth condition of ‘ $p \supset q$ ’.

I, therefore, think that ‘ $\supset$ ’ be so defined as to make ‘ $p \supset q$ ’ true under condition of FT. For otherwise the distinction between ‘ $p \supset q$ ’ and $q \supset p$ ’ cannot be maintained. And the obliteration of the distinction will not only be contra-intuitive but also formally disastrous. If FT condition is dropped along with TF condition then whenever the other two conditions hold we would be justified in inferring q from p as also p from q, even when p and q are not equivalent. And surely p can imply q without being equivalent with q or otherwise there would be no distinction between ‘ $p \supset q$ ’ and ‘ $p \equiv q$ ’. And where p implies q without being equivalent with q, this is so because q cannot imply p.

Even when p and q are equivalent we need distinguish between ‘ $p \supset q$ ’ and ‘ $q \supset p$ ’. For there is a difference between ‘ $p \supset p$ ’ and ‘ $p \equiv q$ ’. In the latter case not only are the two propositions p and q different but also ‘ $p \supset q$ ’ and ‘ $q \supset p$ ’ are different. They are different precisely because their truth conditions are different. Thus FT is a truth condition of ‘ $p \supset q$ ’ but falsity condition of ‘ $q \supset p$ ’. If therefore this condition is dropped p and q will not only be equivalent but also identical.[6] Thus to say that two propositions are equivalent is not to say that they have identical truth conditions but to say they imply each other, even if these always go hand in hand.

We see therefore that the need for distinguishing between inference of q from p and of p from q necessitates a restriction in the characterization of the inferential relation. And the allegedly paradoxical truth condition of material implications serves just this purpose. Viewed thus we shall not say, as is commonly said, that material implication could pass for the inferential relation but for this paradoxical truth condition of it. We shall rather say that but for this condition the doctrine of material implication could not pass for an adequate doctrine of inferential relation. Thus so-called paradox of material implication is not an avoidable consequence of the fiat of the authors of PM but a necessary component of the notion of material implication considered as identical with the relation of inferribility.[7]

III

We have shown that the paradoxical truth condition, if it be so, of material implication is a necessary part of the meaning of material implication considered as the relation of inferribility. This, however, does not mean, as we hope to show in the next section, that this (paradoxical) truth condition is the condition for there *obtaining* between two propositions, say, p and q, the relation of inferribility. Inclusion of this in a truthfunctional system may be viewed as the device to show what is otherwise expressed by saying that q is not only as a matter of fact true when p is true, but is necessarily so, if inference of q from p is correct.

In the present section we shall show that ' ⊃ ' does not always represent a relation of inferribility. This may enable us to see that the doctrine of material implication considered as a doctrine of inference is not vitiated by the alleged paradoxes. Besides representing at times inferential relation, ' ⊃ ' also functions as a sentential connective. Attempts are made to separate formally these two roles of ' ⊃ ' in Standard Logic by introducing different symbols to symbolize material implication as a truthfunctional connective and material implication as the relation between premiss and conclusion in a correct inference. We shall try here to make a similar distinction, within the limits of the terminology of PM, without overemphasising the difference. For this we consider it more important to clarify the two notions of truthfunctional connective and inferential relation as they stand to each other. These two notions, though distinct, are closely related.[8] This fact rather than the inability of the authors of PM to distinguish the two, is really responsible for to whatever extent the two notions have come to coalesce.[9]

Considered as a truthfunctional sentential connective ' ⊃ ' is not a primitive notion. It can on the other hand be defined in terms of other notions such as those of negation and disjunction. But considered as representing the relation of inference the notion of material implication is primitive.[10]; at least it is more basic than other truthfunctional connectives. Material implication in this sense cannot be defined in terms of other truthfunctional connectives. For truthfunctional connectives themselves involve, in some indirect sense, the notion of inferribility.[11] For a truth-function is that the truth value of which is uniquely determined by the truth value of its arguments. Thus when we say '$p \vee q$' is a (disjunctive) truthfunction we mean that its truth value can be ascertained if we know the truth value of its compomnent or components. But to say this is to say that the truth value of the compound (truthfunction) can be inferred from the known truth value of its components. Thus when we say '$p \vee q$' is true if p is true we may put the matter as well in this way :

$$\begin{array}{l} p \\ \therefore p \vee q \end{array}$$

But, as we shall see, though the notion of inference is involved in some way in the notion of truthfunction yet this is not the only form of inference or even the most important kind of inference. To distinguish this sort of inference from what we consider the most important sort of inference we shall reserve the term inference for the latter kind of inference only. We shall come to this later.

If in this way the notion of inference is involved in the notion of truthfunction, the notion of inference cannot be reduced to or defined in terms of truthfunction. Or at least there should be different types of inference.[12]

But what holds of '$p \vee q$' or '$p . q$' holds also of '$p \supset q$' since '$p \supset q$' is a truthfunctional compound of p and q. If thus '$p \supset q$' is a truthfunction and hence presupposes the notion of inferential relation, how can it represent the relation of inference itself ? There is, however, a difference. When we treat '$p \supset q$' as a truthfunctional compound we suggest that some definite truth value of '$p \supset q$' is inferrible from some known truth value of p or q or both. Thus '$\sim p \therefore p \supset q$', '$q \therefore p \supset q$', '$p.q \therefore p \supset q$' and so on. None of these meanings of material implication (considered as a sentential connective) allows us to infer q from p. But considered as an inferential relation material implication enables us to do just this. We should therefore, distinguish the truthfunctional derivation of '$p \supset q$' (or '$p \vee q$' etc.) from the derivation of q from p. We may say that truthfunctional derivation of '$p \supset q$' amounts to a construction of an implication in the dissolution of which inference consists.[13]

Truthfunctional derivation of '$p \supset q$' may be said to be adding (compounding) q to (with) p by way of implication just as '$p \vee q$' means adding q to p by way of disjunction. Addition of one proposition to another, i.e., construction of a compound must satisfy certain conditions if the constructed compound is to be a truthfunction of the propositions added. And unless we keep distinct the implication as merely a (truth-functional) sentential connective from implication as the relation of inference, we may take these very conditions to validate the inference of the implicate from the implicans.

But how to formulate and express this difference without using two different symbols to represent the two roles of '$\supset$'? To begin with we may say when '$\supset$' replaces words like 'because', 'therefore', etc., '$\supset$' represents the relation of inference. Thus as a test for whether '$\supset$' represents a relation of inference we are to try to replace '$\supset$' by such words as 'therefore', 'because' etc. In '$\sim p \supset (p \supset q)$' we can replace the first occurrance of '$\supset$' by 'therefore' and rewrite the function as "$\sim p$ therefore '$p \supset q$'." So in its first occurrence here '$\supset$' represents a relation of inference. But '$\supset$' occurring between p and q cannot be regarded as representation of inferential relation since we cannot here replace '$p \supset q$' by 'p therefore q'. Thus though we have here in '$p \supset q$' a truth functional implication we have here no representation of inferential relation. This is why we can say that $\sim p$ inferentially yields '$p \supset q$', but since the latter does not amount to an inference of q from p, we cannot say that the falsity of p entails q. To assert that '$p \supset q$' is true, is not to assert that q is true. Again in '$[(p \supset q) \cdot p] \supset q$' the second occurrence of '$\supset$' is a representation of inferential relation.[14]

Thus in '$\sim p \supset (p \supset q)$' or '$q \supset (p \supset q)$' the second occurrence of '$\supset$' is not a representation of the relation of inference. But in its first occurrence '$\supset$' represents the relation of inference. Likewise the second occurrence of '$\supset$' in $[(p \supset q) . p] \supset q$' is a representation of inferential relation. But even here there is a difference. The first represents the inference of a truthfunctional ('$p \supset q$') from its component $\sim p$' (or, say, q). The second is the representation of the inference of a part of a truthfunctional compound (q) from the truthfunction itself i.e. $(p \supset q)$ along with the other part of the compound (p). This second, that is, the derivation of a part of a truthfunctional compound from the compound itself is in the important sense inference. But the derivation of a truthfunctional compound from part or parts of it is more a matter of construction rather than inference in the important sense. In a formal system like PM inference or demonstration is primarily understood in this important sense.[15] The proposition to be demonstrated is first shown by substitution etc. to be contained in another proposition, which is already asserted. Then on the basis of the other asserted part of it the proposition under consideration is asserted or inferred.

Thus though a material implication (i.e., an implicative compound) can be derived from or established by, say falsity of the antecedent, yet, when this condition holds no inference in the important sense, is possible; that is, yet there is no inferential relation proper.[16] Only when we add a suitable proposition, i.e., assert a part of the implicative, along with the implicative itself, can there follow the other part. Thus in the important sense inferential relation is represented by the second occurrence of '$\supset$' in such formula as '$[(p \supset q) . p] \supset q$'.

Thus we are to distinguish the following three cases of material implication :

(i) '$p \supset q$'
(ii) '$[(p \supset q) . p] \supset q$'
(iii) '$\sim p \supset (p \supset q)$'

The first is not a case of inference at all. For elementary propositions being logically independent of each other cannot stand to each other in inferential relation. We can further assert that no elementary proposition can be inferred from the negation of another elementary proposition. An elementary proposition can be inferred from another elementary proposition only via a truthfunctional compound which contains both the elementary propositions under consideration. Thus (ii) is a legitimate case of inference. The third is also not a case of inference proper for to consider it as a case of inference proper exposes one to the comments similar to those contained in Prior's article Round

About Inference-Ticket. And even if this is viewed as an instance of inference the conclusion is '$p \supset q$' in which none of the two is asserted. Thus $\sim p$ cannot be said to entail q, or, for that matter, a false proposition cannot be said to entail a true proposition.

We can, therefore, finally say that we can take '$\supset$' as representing an inferential relation if it occurs between a proposition (simple or compound) in the place of a conclusion and a conjunctive proposition of which one part is an implicative compound combining the proposition in the conclusion place and the other conjunct. Or we may put this restriction to inferential movement. When there occurs in the implicate position an (implicative) compound we should not allow the consequent of that compound to be asserted.

IV

We have seen that FT condition is a necessary part of the meaning of material implication considered as the relation of inferribility. But when this condition holds it is possible to construct the compound '$p \supset q$' such that the latter is a truthfunctional compound. If this construction of the compound is taken to be a case of inference then also q is not represented as the conclusion of that inference. Thus we concluded that falsity of p did not entail q. In any case FT is not a condition for there obtaining a relation of inference between p and q. The relation of inference obtains between '$(p \supset q) . p$' (i.e., say P) on the one hand and q (i.e., say Q) on the other. And in P $\supset$ Q the '$\supset$' represents a relation of inference proper for here P stands for the conjunction of an implication with one part of that implication for the other part of which Q stands. And though FT is a necessary part of the meaning of '$\supset$' as it occurs in P $\supset$ Q yet it is not a necessary condition for there obtaining between P and Q the relation of inference. It is necessary so that P $\supset$ Q may be distinguished from Q $\supset$ P. Neither is it a sufficient condition for there obtaining between P and Q the relation of inference. It is, however, a sufficient condition for there obtaining a truthfunctional implicative relation between p and q. In other words FT condition is a sufficient condition for the construction of an implicative compound with the true proposition (viz. *q*) in the implicate position and the proposition which is false (viz. *p*) in the implicans position. Paradox is generated when the sufficient condition for construction of a truthfunctional compound is at the same time taken to be the sufficient condition for there obtaining a relation of inference, that is, for the derivation of a part of the compound from the compound itself.

Thus we hold that FT condition is to be viewed as a device to distinguish between the inferences '$P \supset Q$' and '$Q \supset P$'. It is to be further viewed as a device to express a certain feature of the inferential relation which is otherwise expressed by saying that if the relation permitting correct inference obtains between P and Q then Q does not only follow from P as a matter of fact but as a matter of necessity.

This, therefore, is another feature of the intuitive notion of inference or, to be more accurate, intuitive notion of correct inference : derivation of Q from P is intuitively correct if assertion (truth) of P constitutes a sufficient justification for the assertion (truth) of Q.[17] And when is this the case ? When the falsity of Q is a necessary condition for the falsity of P? That is, to say inference of Q from P is a correct inference if P cannot be false unless Q is false. Or falsity of Q is a sufficient condition for the correct inference of falsity of P. Now we can represent the fact that P cannot be true if Q is false, when there obtains a relation permitting the valid deduction of Q from P, if we can show that if P is true then Q is also true; that is to say, if we disallow the combination TF.

But there is another feature of our intuitive notion of correct inference. According to this notion it is not only the case that when P is true Q is also true, but also, that when P is not true Q may or may not be true. We can surely infer the wetness of the ground from there being a rain. But if it does not rain the ground need not necessarily be dry. The conclusion still retains its "hypothetical validity".[18] Thus intuitively it is clear that if the premiss is false the conclusion may or may not be false. We think, therefore that the intuitive notion of correct inference is restrictive in that it disallows any inferential movement from the falsity of the premiss. Now this feature can be adequately represented in our symbolism if it shows the neutrulity of the falsity of the premiss to the truth or falsity of the conclusion.[19] The doctrine of material implication and the symbolism of PM succeed in doing this. For analysis of the notion of material implication clearly shows that when P is false the relation of correct inference (material implication) holds, if it holds at all, whether Q is true or false. Thus it permits both FT and FF conditions as truth conditions of $P \supset Q$. This shows that we are equally justified, if we are justified at all, to assert falsity of Q under condition of $\sim P$ if we are justified to assert the truth of Q under the same condition. That is if we allow Q to be inferred from $\sim P$ then, since $\sim Q$ may as well be inferred, contradiction will result. This is to be taken as disallowing any inferential move from the falsity of the premiss. This is another reason why FT condition should be retained. This condition along with the condition FF adequately restricts the notion of material implication so that the relation of material implication can pass for the relation of inferribility.

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NOTES

1. Some of the best clarifications of the notion of material implication, within the limits of truth-functional logic, have been suggested by Russell himself. Even before Johnson, for example, Russell had shown the harmlessness of the paradoxes of material implication. See note 16 below.

2. Quine has shown (see his article, *Implication and the Conditional* in *Logic and Philosophy*, ed. Gary Iseminger, Appleton-century crofts) that it is possible to maintain, without abandoning the policy of admitting none but truthfunctional compounds, that certain relations between sentences depend on something other than the truth values. So far we are not opposed to Quine. We only do not wish that intensional concepts be involved in the analysis of material implication considered as the relation of inferribility.

3. Quoted by Von Wrignt in his *Logical Studies* (Routledge and Kegan Paul) p. 166.

4. Robert Ackermann, *An Introduction to Many-Valued Logics* (Routledge and Kegan Paul), p. 6.

5. It will not do to say that even if we drop FT condition '$q \supset p$' can be distinguished from '$p \supset q$' with reference to TF condition which is a falsity condition of '$p \supset q$' but truth condition of '$q \supset p$'. For this is an analogous paradoxical truth condition for '$q \supset p$'. And the question is whether we should at all retain this sort of truth condition as a part of the meaning of '$\supset$'.

6. " ....Two truthfunctions which have the same truth-value for all values of the argument are indistinguishable." Russell, Introduction to Mathematical Philosophy (George Allen & Unwin Ltd.), p. 148.

7. It may appear that we suggest that the joint truth and falsehood of two propositions are sufficient conditions for there obtaining, between the two propositions, the relation of inference. In a sense this is true. But we insist on a certain order in the truth value distribution. This order cannot immediately be represented in the symbolism of PM. But we can utilize FT condition to make good this deficiency to a large extent. (See below note 17). So we do not think that the charges of Anderson and Belnap affect the present interpretation of material implication. Anderson and Belnap, *Entailment in Logic and Philosophy* ed. Iseminger (Appleton-Century-Crafts), p. 78.

8. '$p \supset q$' is not the same as 'q is inferrible from p'. But whenever there obtains [e.g. between '$(p \supset q) . p$' and 'q'] the relation of inference there also obtains a material conditional. The converse need not and perhaps cannot be read into PM.

9. Russell, *Introduction to Mathematical Philosophy*, p. 151.

10. Russell seems to have seen this point but he did not elaborate it. Russell, *ibid.*, p. 146.

11. Russell, *ibid.*, p. 146.

12. Russell, *ibid.*, p. 151.

13. Whitehead and Russell, *Principia Mathematica* (referred in the text as PM) (Cambridge University Press, Paperback), p. 9.

14. " ....'$\vdash p \supset \vdash q$'....is to be considered as a mere abbreviation of the threefold statement '$\vdash p$' and '$\vdash (p \supset q)$' and '$\vdash q$'. Thus '$\vdash p \supset \vdash q$' may be read '$p$, therefore q'. Russell, *ibid.*, p. 9.

15. "The process of inference is as follows : a proposition 'p' is asserted, and a proposition 'p implies q' is asserted, and then as a sequel the proposition 'q' is asserted." Russell, *ibid.*, pp. 8–9.

"In mathematical practice, when we infer, we have always some expression containing variable propositions, say p and q, which is known, in virtue of its form, to be true for all values of p and q; we have also some other expression, part of the former, which is also known to be true for all values of p and q; and in virtue of the principles of inference; we are able to drop this part of our original expression, and assert what is left." Russell, *Introduction to Mathematical Philosophy*, p. 149.

16. " Whenever p is false, 'not—p or q' is true, but is useless for inference, which requires that p should be true." Russell, *ibid*, p. 153. also *Principia Mathematica*, p. 94.

17. "The essential property that we require of implication is this: 'What is implied by a true proposition is true'." Russell, *ibid*, p. 94. Russell also says that the falsity of p does not yield q. This two together constitute adequate restrictive condition of material implication. But the difficulty should not be minimised. These two along with the fact that TF is a falsity condition merely tell us that truth-value distribution between the implication and the implicans should be uniform. That is, either both are true or both are false. But what is necessary is that when p is true q must be true and when q is false p must be false. This order of truth-value distribution, however, cannot satisfactorily be expressed in the symbolism of PM. For '$(p \cdot q) . (\sim q . \sim p)$' has no meaning in PM other than '$(q . p) . (\sim p . \sim q)$'. Admitting this limitation we have tried in the paragraph concerned the best that can be done in the informal way. But at the same time we maintain that sufficient indication towards this interpretation is there is Russell's own writings.

18. Russell, *Introduction to Mathematical Philosophy*, p. 198.

19. Though Russell does not tell us explicitly whether he means this neutrality is already represented by the truth table or by any other means yet he explicitly says that this neutrality is there. "The essential property that we require of implication is this: 'What is implied by a true proposition is true', It is in virtue of this property that implication yields proofs. But this property by no means determines whether anything, and if so what, is implied by false proposition." Russell, *Principia Mathematica*, p. 94.

* Since the discussion in this paper is informal I have avoided quotation marks etc. unless there is serious chance of misunderstanding.

PYRRHONIAN SCEPTICISM AND *EPOCHĒ**

I. What is *epochē* :

The Pyrrhonian sceptical position, as depicted by Sextus Empiricus, is mainly directed against the philosophers who asserted the possibility or impossibility of knowledge. The philosophers who affirmed the possibility of knowledge (Plato, Aristotle, Stoics and Epicureans), labelled by Sextus as 'Dogmatists', chiefly patronized the view that we can have certain knowledge of the 'non-evident' objects (i.e., things as they really are). Pyrrhonism is also distinct from the 'Academic philosophy' of men like Carneades and Cleitomachus who dogmatically asserted the impossibility of knowledge. To assert anything dogmatically is to cease to be a sceptic. Carneades was first and foremost a critic especially of the Stoic theory of knowledge.[1] While Carneades maintained the impossibility of certain knowledge and stressed the need for suspension of judgment (the Greek term is *epochē*), he seemed to have worked out a more comprehensive theory of probability or 'persuasiveness' as a guide to thought as well as action.

The Pyrrhonian sceptic, on the other hand, suspends judgment on both the questions regarding the possibility or impossibility of knowledge. He refuses to recognise any belief as being more probable than any other. The sceptic, as against both his rivals, takes arguments both for and against 'non-evident' things as equally probable or improbable, no one being more or less worthy of assent than another. Sextus writes, "Those who believe they have doscovered it (the truth) are the 'Dogmatists', specially so called—Aristotle for example, and Epicurus and the Stoics and certain others; Cleitomachus and Carneades and other Academics treat it (the truth) as inapprehensible : the sceptics keep on searching " (Sextus Empiricus, *Outlines of Pyrrhonism*, English translation by R. G. Bury, The Loeb Classical Library, Sext. Emp. Vol. 1, p. 3, Heinemann, London, 1933). By *judgment* the sceptic generally means the mental act of asserting (affirming or denying) an assertible content. The development of the sceptic's argument, according to Sextus, proceeds in a fashion, quite different from that of the dogmatic philosophers. To arrive at a basic understanding of what *epochē* or suspension of judgment is, let us begin with the following quotation from *Outlines of Pyrrhonism :* " Scepticism is an ability or mental attitude, which opposes appearances to judgments in any way whatsoever, with the result that owing to the equipollence of the objects and reasons thus opposed, we are brought first to a state of mental suspense and next to a state of ' unperturbedness ' or quietude. . . . Suspense is a state of mental act owing to which we neither deny nor affirm anything " (Ibid., pp. 7–9).

The first point that is to be noted about *epochē* or suspense of judgment is that the sceptic does not simply stubbornly refuse to affirm or deny anything. They try to justify *epochē*, not only in general, but in regard to each particular proposition. That is to say, to each such proposition the sceptic opposes an equally strong counter-proposition. This is done in one of the following three ways : (*a*) by opposing arguments in favour of a proposition to arguments against it (as in the discussion of God), (*b*) or by opposing appearances to arguments (the apparent reality of motion opposed to Zenonan arguments against its reality), (*c*) or by opposing appearances to appearances (the oar appears bent in the water, appears straight out of water), (*Ibid*., Vol. 1, p. 71). The main contention is that, for any such problem whatsoever, no rational basis can be given. The sceptic finds that to any pro-argument for a doctrine or proposition there can be found at least an equally strong contra-argument and when such possible arguments conflict, there seems to be no rational basis for preferring either of them as being more probable than the other. The affirmation and denial will thus be ' equipollent ', meaning that " no one of the conflicting judgments takes precednce as being more probable " (*Ibid*, p. 9). Here the sceptic finds himself involved in a contradiction of equal weights and being unable to decide between the alternatives, prescribes suspension of judgment. Of contradictory propositions one is not more valid than the other. According to the sceptic we should on this account express nothing, but should withhold our judgment. In favour of such suspension the sceptic argues that, this is the only way through which we can stop dogmatizing and avoid the state of being worried and frustrated, thereby achieving mental peace or quietude (the Greek term is *ataraxia*). But the claim is that judgment is suspended not because it leads to mental equanimity, but because there is nothing to choose between one proposition and its denial. That is to say such a state of suspension of judgment is attained on logical grounds. The sceptic has no predisposition in favour of any of the conflicting propositions. It just so happens that they fail to find sufficient evidence in favour of any of them so that they can retain one and reject the other. Arne Naess in his book *Scepticism* argues in a similar way : " The corresponding psychological phase is the gradual development of a deeply entrenched bent of mind, a state of suspension of judgment, or *epochē* (p. 5). When the mind is thus perfectly balanced so that we neither deny nor affirm anything, tranquility or quietude follows inevitably " as the shadow follows the body ". The sceptic thus abstains from passing judgment to keep himself secure against a disturbed condition of mind resulting from mistaken views. The moral worth of the abstinence of judgment consists in the fact that it works as an antedote to frustration and produces equanimity.

II. Limits of *epochē* :

Although Sextus claims that due to the *epochē*, " we neither deny nor affirm anything ", in other passages he qualifies the ' anything '. Judgment, according to Sextus, is not suspended on all propositions, but only on those propositions concerning " the non-evident objects of scientific enquiry ". *Epochē* clearly has limits, but specification of these limits presents a difficult task. Sextus often claims that the sceptic suspends judgment only about the ' non-evident ' (the Greek term is *adelos*). He does not overthrow the appearances (the Greek term is *phainomena*). Sextus illustrates the difference in the following way :" . . . . honey appears to us to be sweet. . . . but whether it is also sweet in its essence is for us a matter of doubt, since this is not an appearance but a judgment regarding the appearance " (Op. cit. Vol. 1, p. 15).

Thus it would seem that the appearances are not subject to doubt, but judgments about appearances; these judgments being not reports of what appears but metaphysical judgments as to what lies behind the appearances. Sextus acknowledges the importance of what may be called ' appearances ' and he allows the possibility of uttering expressions with regard to the appearances in appropriate situations. One can recognise or have opinions about what appears to be the case, without giving up one's attitude of suspense as to what really is the case. Although the sceptic doubts each and every proposition which refers beyond the appearances, it is not possible, according to Sextus, to be sceptical about the appearances themselves. Sextus writes, "Those who say that 'the sceptics abolish appearances', seem to me to be unacquainted with the statements of our school....we do not overthrow the affective sense-impressions which induce our assent[2] involuntarily : and these impressions are the 'apperances'.

In the pair of examples given by Sextus, (*a*) 'Honey is sweet', and (*b*) 'Honey appears to be sweet', the first example makes a claim about a perceptual object whereas the second merely reports one's immediate experience. The sceptic rejects (*a*) because it tries to assert something about the nature of the thing. But the reports of sense-experience cannot be relied upon to give a true account of anything which lies beyond it (i.e., non-evident thing).

What is the nature of these appearances, which have been freed from the scope of *epochē* ? The sceptical standpoint regarding these appearances seems to suggest an identification of appearances with sense-impressions (in modern terminology 'sense-data'). But such an identification seems to raise certain difficulties. Sextus' writings are in great part devoted to marshalling the 'equipollent' evidence on each side of two conflicting propositions and thus include judgments that the evidence in each case is 'equipollent'. But 'equipollent' roughly means 'of equal probability'. Thus judgments of probability are also reports of appearances. But probability is hardly a sense-impression. The identification of appearances with sense-impressions would not work if Sextus' own views are to remain free from the *epochē*. Further, Sextus will not allow any sort of commitment with regard to the existence of anything 'given' which affect the senses and appear in a certain way to the observer. When the sceptic says, "Honey appears sweet", what he speaks about is not that there is a sense-impression of sweetness, as opposed to an object causing or conditioning the sense-impression.

The sense-impressions cannot also be identified with the subjective states of the observer. The sceptic concedes the fact that the sense-impressions cause certain affections in the mind of the observer, but the sense-impressions are not themselves these affections but appear to be different from these affections. And if the sceptic is asked to state the nature of a sense-impression (i.e., whether it is subjective or objective in the ultimate sense), he suspends judgment. So the appearances cannot be said to be subjective in the same sense in which the affections are said to be subjective.[3]

The sceptic, according to Sextus, will simply acquiesce in what appears to him in a non-cognitive way, i.e., with no commitment as to whether the appearances are something ' given ' or are certain mental states of the observer. Although the sceptic assents to the way things are said to appear, he does not approve the possibility of knowledge about the things as they really are, i.e., ' non-evident things '. Aristotle maintained that in knowing, the soul receives the form of the object and that actual knowledge is identical with its object. According to the sceptic, we are able to receive merely the appearances and nothing beyond them. Our assent to these appearances is due to the fact that in accordance with them we lead the everyday life. The statements about appearances are simply descriptive of present experiences which stimulate and guide actions and make the day-to-day life possible. When the sceptic asserts that honey appears sweet to him, he just assents to the way the honey is said to appear and act accordingly in a non-commital way, i.e., avoiding commitment as to whether honey really is sweet. To the sceptic, Sextus writes, " .... belief is a matter of simple yielding without any consent " (*Ibid*, p. 143).

III. Motive behind the *epochē* :

Sextus provides us with a clear explanation for the view that assent is granted only to phenomena (appearances). We cannot but accept the fact that honey tastes sweet or that we feel warm or cold at some particular times. In these cases, Sextus holds, assent is compelled by our own nature—by the fact that " we are naturally capable of sensation and thought " (*Ibid*, 1.17). Nevertheless to affirm further that honey really is sweet is to make an inference from the undisputed appearances to something non-evident beyond them. The fact that we are continually affected in a certain way, though in itself undeniable, does not necessitate any conclusion about anything which produces these impressions.

All perceptual statements (i.e., statements about non-evident objects), as they refer beyond appearances have been excluded from the class of being true or false. When a statement confines the information it conveys to appearances only, it might seem possible to regard it as true or false. But Sextus declares unequivocally that " nothing is true ". Further, these appearances are found to vary from person to person at the same time and to the same person at different times. All the conditions set forth in the ten *Tropes*[4] of Aenesidemus which are acknowledged by Sextus point out that impressions received are always affected by different conditions. Since in each and every case of experience, the character of what is said to appear is affected, there is no satisfactory way to differentiate veridical experience from a non-veridical one. Although Sextus accepts the ten *Tropes*, he attacks Aenesidemus for his doctrine that the appearance about which there is general agreement is true. The fact of general consent with regard to any appearance, according to Sextus, has nothing to do with the fact of their being true or false.

Sextus disputes the possibility of any criterion by which we can differentiate the veridical from non-veridical experiences. It would be somewhat misleading to suppose that Sextus asserts the impossibility of any criterion. What he does is to suspend judgment on the question. Sextus writes, " .... since the criterion of truth has happened to be unattainable, it is no longer possible to make positive assertions either about those things which seem to be evident or about those which are non-evident " (*Ibid*, p. 213).

Nevertheless, the apparent rejection of statements about appearances from the class of the true (or false) seems to be a little paradoxical. Sextus seems to hold contradictory views in regard to the truth of the statements about appearances. On the one hand, he holds that these are incontestably true, to which our assent is compelled by our very nature. On the other, he seems to contend that nothing can be known to be true and that we ought to suspend judgment on everything, i.e. both evident and non-evident objects. This dilemma can be resolved by holding that it is based on an equivocation on the meaning of ' true '. In the first case, ' true ' is employed in its relative sense, whereby it means something like, ' in conformity with the way things appear '. In the second case, 'true' is to be taken in its 'absolute' or 'ultimate' sense, whereby it may be taken to imply something like, 'in conformity with the things as they really are'.

That Sextus does not grant the truth (or falsity) of statements of appearances suggestss an assumption on his part that the concept of truth can be appropriately employed only in connection with the statements regarding things as they really are. That is to say, a statement to be characterized as true or false, must make a claim about some existing object (fact) in the world—must claim, for example, that something exists or has a certain character; we can thus determine whether it is true by reference to the relevant objects or facts. Now, a statement concerning appearances does not make such a claim; it says nothing about what exists or about the real character of existents. Hence, the question of truth or falsity of such statements of appearances does not arise, if the above assumption is kept in mind.

Although the sceptic refuses to attach the epithets 'true' and 'false' to the statements with regard to appearances, he, nontheless, accepts the fact that our assent is granted only to the phenomena. What is the motive behind such an assent ?

To understand this, we should first note that the sceptic employs the word 'criterion' in two different senses. One is that by which 'we judge reality or unreality', that is, the criterion of truth by which we differentiate veridical from non-veridical experiences; and the other is that which we use as a guide in ordinary life. The sceptic will not accept the possibility of any criterion of truth. But he will assent to the appearances which work as criteria for conduct of the normal life. Here the sceptic's assent to the appearances is justified on a pragmatic ground (not in the familiar pragmatist sense). The sceptic links truth with the criterion by which we makes judgments regarding the things which are non-evident and not with the criterion which makes normal life possible. Sextus writes, "Adhering, then, to appearances we live in accordance with the normal rules of life, undogmatically, seeing that we cannot remain wholly inactive". (Ibid, p. 17).

The necessity of suspending judgment, according to Sextus, will not incapacitate us from actions. It is sensible to accept and accommodate ourselves to the social organization into which we are born, to obey the laws, respect the institutions and the conventions of the society in which we live. Sextus is quite explicit in holding that suspension of judgment is not to be employed on the conduct of life. The appearances suffice for the regulation of life, but it is the non-evident that is in question in scepticism. His reason for not letting his doubts extend to the acquiscence in the appearances is that we cannot paralyze the normal life. But Sextus is, all along, cautious in maintaining the distinction between affirming the truth of what one perceives and merely acquiscing in it.

According to Sextus, we should construte the sceptic's utterance as a piece of verbal behaviour, caused by the state of perception. If, e.g., the sceptic says, "I feel cold", he is merely yielding to his natural shivering impulse to say so, not seeking to establish a truth. 'Suspension of judgment' or 'epoche' does not involve the sceptic in practical inaction or indecision, but only in refusal to make truth/falsity claims.[5]

Sextus hold that if inquiry is directed towards the real nature of objects, i.e., objects as they really are, doubt will somehow result. Here the state of doubt is a sort of indecision, an inability to decide between the conflicting propositions, which seem to be equally probable. Doubt is justified on the ground that there is equal evidence both for and against a proposition and, therefore no reason to prefer one alternative to the other. Hence, one must suspend judgment about them. But this suspension of judgment is not really a refraining from inquiry, a putting the question out of the mind so that one is no longer bothered by it. The very act of suspending judgment implies that judgment is being *temporarily withheld*, but the inquiry for discovering truth will be carried on. The state of indecision leads us to a state of indifference not with regard to the inquiry but towards any positive commitment about the non-evident objects. Positive commitment to positions results in mental disquitude, whereas suspension of judgment leads to mental peace. Thus Sextus remarks : "For the man who opines that anything is by nature good or bad is for ever being disquieted.... On the other hand, the man, who determines nothing as to what is naturally good or bad neither shuns nor pursues anything eagerly; and, in consequence, he is unperturbed". (Ibid., p. 19).

Most philosophers before the Pyrrhonists were, in some way or other, inclined to theorize some positive conclusions regarding the real nature of things. More specifically, they were preoccupied with the notion that the possibility or impossibility of knowledge could be demonstrated. Aristotle, for example, asserted that the highest mode of knowledge must tell what things really are and why they are so...The Academic philosophers, on the other hand, dogmatically asserted the impossibility of knowledge about the real nature of things, i.e., non-evident objects. The sceptic avoids such extreme commitments. He is rather reluctant to theorize any positive conclusion. He will just recognize how the things appear and act accordingly to lead the day-to-day life. He deliberately abstains from any positive commitment regarding what things really are and why they are so, which, according to him is antithetical to happiness.

It would be misleading to suppose that the mental peace which the sceptic attains from the suspension of judgment regarding the real nature of things will deter the sceptic from further quest of truth. The sceptic, according to Sextus, mentions quietude in a perfunctory way, for it naturally follows the *epoche*, but he himself would not care for such a state in the least. He has an active mind and passion for enquiry. He is a seeker in the sense that although till now he has not found the truth he leaves open the possibility of finding it. To him the moment, someone makes any commitment that he has grasped the truth or the moment one asserts that truth can never be grasped, enquriy for him has reached a dead-end. The sceptic, on the other hand, is an 'open-minded enquirer.' The necessity of suspending judgment with respect to the ultimate truth neither debars the possibility of leading the day-to-day life nor does it throw the philosophic inquiry into an impasse. Sextus writes, "For to continue the investigation of problems is not inconsistent in those (the sceptics) who confess their ignorance of their (non-evident objects) real nature, but only in those (the 'Dogmatists') who believe they have an exact knowledge of them; since for the latter (the 'Dogmatists') the inquiry has already reached its goal, whereas for the former (the sceptics) the ground on which all inquiry is based—namely, the belief that they have not found the truth—still subsists." (*Ibid*, *p*. 158–159)

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NOTES

1. According to the Stoics all our knowledge is ultimately derived from the senses. They believed that the acquisition of knowledge from the evidence of the senses depends upon a conjunction of the presentation (arising from an external object) and an act of ' assent ' which is a free mental act and in our power. Carneades argued that false presentations can always be mistaken in some circumstances for true; hence, the concept of a recognizable presentation does not account for knowledge.

2. Price in his article, ' Some Considerations about Belief ' (Knowledge and Belief,ed. A. P. Griffiths, pp. 42–59, Oxford University Press, 1967) took ' assent ' as one of the two elements involved in ' belief '. ' Assent ' is said to consist of two elements, one *volitional* and the other *emotional*. The former, according to him, " is analogous to choice, or preference or decision," the latter involvs a " feeling of *sureness* or *confidence* with regard to it (the belief) ". When the sceptic assents to the phenomena he may have the volitional attitude towards a set of appearances than another not because it is more probable than the other but as it seems to be more workable than the other for executing actions. But the sceptic lacks any emotional attitude towards the phenomena.

3. In his writings Sextus presents an account of the Cyrenaic position which propagated subjectivism. According to the Cyrenaics, the affections are infallible, but we cannot grasp the objects which produce these affections. The sceptic, according to Sextus, accepts subjectivism up to the extent that these appearances seem to indicate just a state in the mind of the observer.

4. The ten *Tropes*, indicate that one should suspend judgment about all claims to knowledge extending beyond immediate experience. Our impressions of an object are observed to vary according to different perceptual conditions, each trope stressing the effect of a particular set of conditions on perceptual experience. Because of these variations, it is argued, we can say how an object appears to us but can not say what is its real nature.

5. Arne Naess contends in a similar way, " Sextus would allow that the sceptic may convey in word what *appears* to him, but in a way that does. not amount to an assertion in the sense in which to assert something is positively to take a stand.... on one side or other of a contradiction " (op. cit., p. 45).

DISCUSSION AND REVIEWS :

ON KANT'S THEORY OF SYNTHETIC *A PRIORI*

In his paper " Kant's Theory of Synthetic *a Priori* " (Indian Philosophical Quarterly, (Briefly, I.P.Q) New Series, Vol. II, No. 7, July 1975, pp. 395–403) Mr. Ram Lal Singh has made an attempt to defend Kant's view regarding synthetic *a priori* judgements against logical postitivists and modern logicians. Whether his defence of Kant is acceptable or not (he has not given any arguments in support of Kant's doctrine), there are many erroes in his exposition of Kant's and other relevant views regarding the subject. I wish to point out some of these here.

Mr. Singh at the beginning of his paper tries to explain the nature of Kant's analytic and synthetic judgements. However, he is not careful in presenting Kant's definition of these judgements. He nowhere mentions Kant's definition of an analytic judgement as one in which the predicate is contained in the subject. Instead, at the end of the paragraph, he remarks, " A judgement whose denial would be a contradiction in terms and whose negation would be logically impossible would be analytic " (I.P.Q., *ibid*, p. 395). Mr. Singh seems to think that the denial and the negation of propositions are two different processes, which they are not. And Kant does not define an analytic judgement in this way. Kant makes use of the law of contradiction in showing the truth of such (i.e. analytic) judgements.

Further, contrasting an *a priori* judgement with an *a-posteriori* one, Mr. Singh says, " The *a posteriori* judgement increases and extends our knowledge but lacks necessity and certainty " (*ibid*, p. 396). It seems that a distinction has to be made between necessity and certainty. The former is a logical notion related to the law of contradiction, whereas the latter is an epistemological one, referring at times to one's mental states, admitting of degrees, and varying with the kind of evidence available to us. Further, necessity is a non-temporal predicate, certainty is a temporal one, having a reference to the point of time, when the judgement is made. In view of the above distinction it can be held without any error that even an *a posteriori* judgement may be certain. The term is associated with Descartes, and it is generally held that the fundamental truth which he arrived at through his method of doubt, was certain without being necessary. The question whether *COGITO ERGO SUM* is an empirical proposition can indeed be raised, but is independent of the distinction that has just now been drawn, and can be discussed separately.

Mr. Singh's next sentence runs, "The *a priori* judgement accounts for the necessity and universality, but it is unable to increase our knowledge." Now this statement will be true only if such *a priori* judgements are analytic.

Mr. Singh refers to Mill's views regarding the truths of logic and mathematics, and remarks that if Mill's view is accepted, then Kant's distinction between analytic and synthetic judgements "crumbles down" (*ibid*, p. 398). It should be only "crumbles". However it has not been made clear at all how Mr. Singh arrives at this conclusion. For, in the first place, from the fact that Mill held that the propositions of mathematics do not differ in kind but only in degree from empirical ones that these are *inductive generalizations based on an extremely large number of instances*, it does not follow that no analytic can ever be made. And in the second place, Mill explicitly makes a distinction similar to the analytic/synthetic distinction, though he calls it by a different name. Let us see how Mill makes the alleged distinction.

Adopting the traditional scholastic distinction between the "essential" and "accidental" propositions, and adding to it his own distinction between the "real" and the "verbal" propositions, Mill holds that (1) all essential propositions are identical ones, and (2) that an essential proposition is a verbal one. (*A System of Logic :* Bk. II, Ch. 6, Sect. 4). The proposition "Every man is rational" conveys no knowledge to a person who is familiar with the connotation of "man". The attributes connoted by all the predicates are already asserted when somebody is called a man. These essential propositions, therefore, do nothing but merely explicate or repeat one of the essential attributes which are already though in the concept of the thing. Mill calls such propositions identical, for here the predicate attibute is one of the essential attributes which form the essence of the concept of the subject. The identical proposition can be easily shown to be analytic by using the containment criteriorn of Kant. The real proposition according to Mill is one in which the predicate does not form part of the connotation of the subject-term. All real propositions are informative because they convey information which is not already involved in the connotation of the subject-term. Mill clearly says that the distinction between the verbal and the real propositions corresponds to Kant's distinction between analytic and synthetic judgements. (Op. Cit. Bk. I, Ch. 6, Sect. 4). It is to be noted that both Kant and Mill hold the semantical (or the meaning explication) theory of analyticity and their views regarding the nature of such propositions are essentially one and the same.

Mr. Singh further holds that there is a "marked difference" between Kant's conception of the principle of contradiction and that of the contemporary logicians. According to him whereas contemporary logicians explain the principle with the help of synonymity, Kant explained it with some psychological elements. Now in truth-functional logic the principle of contradiction assumes the form to be $\sim(p \cdot \sim p)$, and this does not require any synosymous expressions at all. The truth of the principle does not depend upon the *meaning* of p. Kant states the principle of contradiction as A is not both B and not–B (at the same time in the same respect,) (*Critique of Pure Reason*, B, pp. 190–191), and it is hard to find which psychological elements it involves since there are no such elements referred to by Kant. Mr. Singh's remark above is, therefore, incomprehensible, since he gives no explanation of his statement.

Referring to the Intuitionistic School of Brouwer, Mr. Singh remarks that according to it the propositions of mathematics are not analytic but synthetic, and he thinks this to be the point in favour of Kant against the logistic account of mathematics. But it should be noted that the intuitionistic school does not entirely agree with Kant. As S. Korner has observed, "Though the intuitive constructions are alleged to be self-evident, the existence of non-sensory intuition is by no means uncontroversial. This can be seen by considering that the Kantian doctrine of the synthetic *a priori* character of Euclidean geometry which is disputed by the intuitionists." Also "The modern intuitionists reject the Kantian claim that there is a self-evident, sharp, and restrictive spatial intuition which alone would make Euclidean geometry a body of *unique* synthetic and *a priori* statements" (*The Philosophy of Mathematics* : Hutchinson, (1950), pp. 140–141).

In the last paragraph of his paper Mr. Singh holds without giving any justification in support of it that Kant would maintain the distincition between analytic and synthetic judgements against Quine and Austin. His definition of an analytic judgement in this context is not only mistaken, but also irrelevant. It should be "An analytic judgement is one whose truth (not the meaning) is determined by the laws of logic alone." Finally Mr. Singh remarks that the claims of science and morality against scepticism can be justified only if the system of synthetic *a priori* judgements is accepted. However, this can hardly be the final answer regarding the nature of propositions about the world. It may indeed be asked in this connection whether Kant's synthetic *a priori* judgements have really solved the problem of causality, or whether it continues to be the "skeleton in the cupboard" of philosophy. Recent ethical theory has devoted its attention to the analysis of the language of morals, and its findings are not favourable to Kant's view regarding morality.

Mr. Singh, however, refers to an important point during the course of his paper and this point occurs in the last but one paragraph of his paper. He says there that Kant uses the word "necessary" in synthetic *a priori* judgements in quite a different sense from the usual one. These propositions are not necessary in the sense in which analytic *a priori* propositions are necessary, viz., that their denial involves a self-contradiction—as Leibniz points out. From the fact that a proposition is synthetic, it is clear that its denial is possible, and therefore, the necessity ascribed to it must be quite different from the logical necessity. These propositions are necessary in the sense of being indispensable for the possibility of experience. The proposition "Every event has a cause", for example, is necessary according to Kant because even though its denial is not self-contradictory, its use is one of the conditions for the possibility of knowledge. Following the terminology of Mr. W. H. Walsh, Mr. Singh calls it "transcendental necessity", and remarks that understood in this sense, there is not absurdity in the idea of synthetic *a priori* judgements. It would have been better if Mr. Singh developed this important point, making it the main argument of his paper, against the attacks of the recent logico-epistemological theories on Kant.

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Amravati.

B .Y. Deshpande

Satyavan P. Kanal : *The Ethics of Devatma*, 1974, Munshi Ram Manohar Lal Publishers Pvt. Ltd., New Delhi, pp. XVII + 350, Price Rs. 40.00.

Recent Indian thought has displayed many tendencies to present some original thought within certain general categories of western thought. The present book is the outcome of a dedicated attempt by Mr. S. P. Kanal, Reader in the Department of Philosophy, University of Delhi, to present in a systematic and lucid way the ethical thoughts of Shri Sheo Narain Agnihotri who, in the late Nineteenth Century, founded Dev Samaj in the Punjab and who was subsequently called Devatma.

The book under review has been written with a view to present, the ethics of Devatma in its metaphysical setting. As the author rightly points out, the ethical thought of Devatma is a corrrollary from his views concerning the nature of reality and, hence, on Spinozaistic method, it can not be understood without first explicating the metaphysics of Devatma. The model is strikingly that of Spinoza's *Ethics* where reflections on the nature of reality lead to the conception of human bondage and freedom. Mr. Kanal writes with the zeal and passion of a completely committed follower of Devatma who is so authentic to each and every word that Devatma has spoken or written.

The book is divided into four parts. First, the Introduction supplies the biographical details about the life and time of Shri S. N. Agnihotri and his intellectual and spiritual development. It vividly unfolds the mind and character of the future Devatma. The second part deals with the nature of the universe. The nature is presented as the all-comprehensive totallity of things which are embodied, mutually related, causally connected but subject to change and qualitatively different in their unique modes of existence. Such a totality is called Nature which is "*one*, *unlimited*, *uncreated*, *self-existent*, whole of *embodied* existences in *ceaseless change for better or worse*" (p. 49). Such an account of reality needs no God to explain anything. Thus, atheistic naturalism is the only answer to the question concerning the nature of reality.

The third part concerns itself with the explication of the nature of the human soul and it is directly related to the next chapter which discusses the nature of the human good and evil as the author says : " The moral laws are the laws of the soul..The laws of ethics and spirituality have no existence apart from the soul." (p. 64). On soul, Devatma's views may be summarised in these words : Human soul is born and is mortal; there are many souls which are all necessarily embodied and subject to change, growth, decay and death as the bodies are; the soul is the doer. But one will surely look askance when he hears from the author that " Human soul is neither a substance nor a pure cognition.. it is an organism with nutritive, motor, sensory and affective, conative and cognitive functions " (p. 143). If, despite such characteristics of the human soul, it is not a substance, what category it should belong to is not made clear. But earlier (p. 69) Devatma, so the author tells us, rejects any materialistic as well as idealistic reductionism and appears to be in favour of presenting matter and soul as two irreducible ends which are nevertheless mutually related. If so, the two must be recognised as belonging to two distinct but real categories which are not supplied. On the other hand, there are passages where the soul is said to arise out of inorganic nature through a process of evolution and yet it is not identical with the body. This insistence on retaining the concept of soul or spirit as something real and yet the desire to give a thoroughly naturalistic or Human account of the same make the whole discussion baffling. One may, in the end, ask why a fancy for ' soul ' which has all the determinate and determinable characteristics of matter except the verdict of Devatma that it is nonetheless not body but soul ?

The fourth and the last part of the book explains in interesting and minute details the nature of the human good and evil. It is here that most of Devatma's ethical ideas are clearly formulated and explained. One connot but appreciate the down-to-earth pragmatic and relastic stance of the propounder as well as that of the author. In fact, both are indistinguishable. The author speaks with the same authenticity and conviction with which Plato spoke of Socrates. But unlike Plato, Mr. Kanal has not deviated a whit from what the master has taught. In the light of the expositions, rendered in this part, we may probably characterise Devatma's ethics as a species of naturalistic, altruistic-hedomistic evolutionism with the vowed aim of applying empirical method in discovery of both moral laws and principles as well as particular injunctions or *adeshas*. But it is in the latter that Devatma's interest appears to be predominant. Moore once declared that 'Casuistry is the goal of ethical investigation' but he was of the view that the problems of casuistry can be adequately dealth with only after we have arrived at satisfactory answers to the questions of theoretical ethics. Devatma appears to have satisfactory answers to the theoretical questions of ethics as well as a correct approach to human psychology. Hence, he ventures constructing a system of casuistry which entitles him to opine on such minor, though important, practical questions as to how we should treat our children and how to regulate our sex-life and whether to smoke tobacco and drink coffee etc.

But the questions of casuistry apart, what one may find difficult to admit is the theoretical or conceptual scheme of this ethics which is based on a particular metaphysics and voluntaristic-evolutionistic psychology. In Pt. II, Ch. 9 (value and existence) the author spells out the framework of Devatma's ethics. Value-disvalue is said to be one of the dimensions of the existents. There is a causal relation between value and existence. But causal relation, as we have earlier heard (Ch. 6) is emergent and so are physical effects. On the strength of the emergent view of causality, different levels of existence are denied (p. 69). Instead of additive, causation is summative and emergent. But values definitely admit of degrees and levels and its identification with his view of causality makes it wholly amorphous. Mr. Kanal rightly holds : "we cannot say that to be is to be valuable", but the reason he has to offer is that it "will amount to denial of existence to disvalue or evil" (p. 100). Then, surely, the metaphysics of Devatma should allow a slightly modified version of this statement, i.e. we can say : 'To be is to possess value or disvalue'. Since the criterion of reality has been formulated as 'to be is to be causally related', and value and existence being causally related, it indeed follows that there is a causal necessity between the two. It would definitely make value-disvalue an inseparable aspect of reality. He himself says that value is 'a necessary condition which *furthers existence*' and ' a necessary condition for *persistence in existence*' (pp.100–1). Hence, value is equated with a mere process of evolutionary change.

The logical outcome of applying empirical method to the highest category of ethics is the denial of value—at least in the sense in which values, separate from facts, may be said to be real. When Induction with Hume and ' basic sentences ' with some logical positivists lost their credibility on the empiricist criteria of observation, experience, verification and testability, values have least chance to survive. If scepticism, nay *solipsism*, is the only fate of human knowledge for the consistent empiricist, ethical empiricism would mostly land into moral solipsism. But Devatma would surely avoid such a disconcerting consequence and, hence, defines value in such a manner that it becomes identical with certain physical and observable features of reality. The treatment of value is the same as meted out to soul. They are both rejected and retained at the same time. In the same way as Devatma traces the origin of soul from organic and inorganic nature, he also asserts that " Values, like facts, are part of Nature " (p. 189).

A familiar and oft-repeated analogy within Devatma's ethical expositions is that of medicine. He talks of health and hygiene of human soul. He says : " Ethics discovers the laws of the health of the soul " (p. 202). He indeed talks of the distinction between the descriptive and prescriptive elements in moral laws but hastens to add that the latter is also amenable to empirical method (p. 203). One is left wondering as to what is the distinction between the two and, unfortunately, Mr. Kanal has none to offer—at least within the framework of the ethics he is expounding.

In his main ethical teachings Devatma rejects the unbridgable chasm between the flesh and the spirit and with a rare practical sagacity and anti-spiritualistic zeal he rejects all form of asceticism and self-mortification as the path leading to the attainment of *moksha*. The author enlightens us with a vidid picture of the state of human bondage which is one of ' low loves ' and ' low hates '. The former are exemplified in selfishness, egotism, indulgences in the satisfaction of biological needs, laziness, greediness etc. Low hates appear in personal jealousy, cruelty, causing avoidable sufferings and harms to others, social, religious, political and personal prejudices and so on. These include all the personal and social evils which are harmfull both to the agent and others (Chs. 27 and 28). One of the most important causes of human bondage is love of pleasures which is the ' secret subtle enemy of the soul ' (p. 270). In the state of bondage man is afflicted with spiritual blindness, spiritual perversions, avoidable suffereings and, finally, the death of the soul (Ch. 30). Low loves and low hates cause the death of the soul (p. 276). [Incidentally, the warning concerning the death of the soul becomes inconsistent in the light of an earlier assertion that ' soul's involvement with the body is both beginningless and endless ' (p. 190).] Deliverance from low loves and hates heralds the dawn of *moksha* which consists in freedom from lust, greed, selfishness, dishonesty etc. After the negative process of *moksha*, there sets in the positive process of *vikas* or evolution which is marked by higher loves and higher hates '. The former include varieties of altruistic feelings which are generically said to be ' altruistic feeling of responsiveness to the needs of others '. These are sense of justice, sense of duty, sense of discipline etc. Higher hates comprise hate of all that is contrary to higher loves. In his account of the rise of altruistic feelings the author rejects the common hedomistic account of some writers that altruism arises out of prudence or self-love. But being an empiricist, Devatma can not also take the benefit of the Butlerian intuitionistic approach. He even goes to the extent of denying practical reason since he understands it as supersensible (p. 197). Thus, he is left with the admission of the truth of altruism as a natural product of evolutionary change !

Devatma is said to have taken a cosmic view of good, bad and value and applies these categories to even non-living things. But what is not made clear is that if ethics concerns itself with the discovery of the laws of the soul, how do ethical categories apply to non-living existents. It would surely appear to be a form of primitive animism to think that consciousness is also present among non-living things which alone would make it possible to talk of low loves and hates if not of high loves and high hates or, else, what does it mean to say that values extend to non-living things ?

Mr. Kanal suggests that Devatma is practical enough to admit that human psychology is under the dominant influence of pleasure principle (p. 243). It is claimed that the *adeshas* or commandments of Devatma are perfectly consistent with the satisfaction of all our biological and other needs which must contribute to our health and care of the body. To this extent, it is one of the kinds of hedonism (pp. 234–35). But his reasons against others forms of hedonism are sometimes mistaken. But it is doubtful that the hedonists eliminate conation and take pleasure-pain to be the motives of thought action' (p. 164). Hence, he falls in the mistake of faculty-psychology which he himself so ardently rejects on the same page. His own analysis of human consciousness as pleasure-pain consciousness (*sukh-dukh-bodh*) makes such a criticism unwarranted. In rejecting the claim of what he has called other forms of hedonism except that of Dvatma, Mr. Kanal uses the Moorean technique of showing that pleasure without consciousness cannot be good. But, as I have discussed elsewhere (see, my article 'Moore's Evaluation of Sidgwick's Hedonism', *IPQ*, Vol. I, No. 2), this criticism is a needless objection against some forms of hedonism. It, however, appears that the application of the term 'hedonism' in the absence of accepting the category of pleasure (in whatever sense it is admitted) as the highest ethical category does not seem justifiable.

To conclude, the lucid account of Devatma's ethics as rendered by Mr. S. P. Kanal in a simple style is a welcome attempt to present a neglected chapter of recent Indian thought. When the current writings on the subject tend mostly to be analytic and meta-ethical, it is refreshing to read a treatise on metaphysical ethics—at least, for a change.

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ANNOUNCEMENT

One of the chief purpose of Indian Philosophical Quarterly is to provide a forum for fresh philosophical thinking for students of philosophy. Hence we would like to introduce a new feature of the journal. Short contributions from bona fide students of philosophy on any philosophical concept or problem they find interesting are invited. Such contributions may not exceed 900 words (approximately *three* pages of the Journal). Such contributions may be sent to the Editor, Indian Philosophical Quarterly alongwith evidence of class and College/Institution. Sufficient return postage should also be sent alongwith contribution.

EDITOR

Robert Busa : *Index Thomisticus* (Thomist Index), *Sancti Thomae Aquinatis Operum Omnium Indices and Concordantiae* (Indexes and Concordances of All the Works of St. Thomas Aquinas), *Concordantia Prima* (First Concordance), 23 volumes, ten of which are in print since 1974. Stuttgart, Frommann–Holzboog, D. M. 370 per volume.

This monumental work made with the help of I. B. M. machines was begun at Gallarate (Italy) in 1949 and carried on later at verious centres in Italy and U. S. A. Robert Busa S. J. is the animator of the large team of scholars who took part in this novel and enormous enterprise. *The Thomist Index* is a pioneer work, for it applies for the first time automation to the field of humanities. It gives the result of the linguistic analysis of all the works of Thomas Aquinas and of some important works connected with them. A collection of texts of over 10 million words is thus analysed.

While helping students of Linguistics and especially of Middle Ages Latin, *Thomist Index* is meant first and foremost to be an instrument for the study of Catholic theology and scholastic philosophy. The *First Concordance*, which is here under review, will contain 23 volumes. The complete series will extend to 40 volumes. The question is, of course, how does one pass from extensive lists of words and verbs to the understanding, not only of concepts, but also of doctrines and of a system of doctrines. The work is an intimation of the new era towards which we are advancing, when, not only Aquinas, but other authors like Śaṅkara, Kant and Wittgenstein, will be subjected to such analyses and then be compared with one another. We can hardly fathom the type of results which this kind of endeavour will yield. The present work is an inspiring witness to the new vision which its authors have. What impact cybernetics will eventually have on the Humanities and on the progress of the human mind is anybody's guess.

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It is one of the important objectives of the Indian Philosophical Quarterly to provide a forum of discussion of the work of contemporary Indian thinkers. Accordingly, the Quarterly had already announced that it would welcome mature assessments and critical appraisals of the work of scholars and thinkers who have made significant contributions to philosophical studies in India to-day, irrespective of their doctrinal affiliations and philosophical commitments. We are now glad to announce that in response to our suggestions, we have received a few articles which deal with the philosophical contributions of Prof. D. Y. Deshpande. We take great pleasure in publishing them in the present issue. We are also publishing in this issue an hitherto unpublished paper of Prof. D. Y. Deshpande. The Indian Philosophical Quarterly is greatly desirous of publishing articles and studies of the work of other scholars as well.

—Editor

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PROFESSOR MALCOLM ON DREAMING

Professor Norman Malcolm's little book *Dreaming* is a neat little eassy in the Wittgensteinian tradition. It seeks to prove a strange thesis, viz. that dreaming is not an actual mental process taking place during sleep. The general view of philosophers and laymen alike is that a dream is the life of the soul during sleep. Against this thesis Malcolm argues that the idea of a dream being an actual mental pheonomenon taking place in sleep is meaningless. The argument used to prove this thesis is ingenious and complicated. Though not always easy to follow, and often very puzzling, nevertheless it is always closely reasoned and clearly expressed. Yet it seems to me that it is not conclusive. I wish in this paper to examine this argument. I am not versed in the Wittgensteinian ways of thought, and it is very likely that my failure to be convinced by Malcolm's argument is due to my own shortcomings. Nevertheless, I think it worthwhile to examine it and try to say why it seems to me inconclusive, if only because some Wittgensteinian scholar will show me where I am wrong.

I

The argument begins by making an apparently commonplace and unexiciting thesis, (I shall call it thesis I), viz. that there cannot be any thought in sleep. But though the thesis is commonplace, the argument used to prove it is not; and the implications drawn from it are certainly startling. One of the implications is that since there cannot be any thought in sleep, and since dreams occur only during sleep, dreams cannot be mental phenomena taking place during sleep. When this implication of Thesis I is pointed out, one wants to hasten to add the following qualification to the thesis that there cannot be thought in sleep, viz. except dreams. But according to Malcolm this qualification is impossible; the argument used to prove the thesis leaves no room for any such exception.

The argument for Thesis I is the following. No one can use the expression " I am asleep " to describe his present state; it amounts to a kind of contradiction. For to *assert* (and not merely *utter* the words) " I am asleep " is to show conclusively that one is *not* asleep and therefore to contradict what one is asserting. (p. 7) Next, it is shown that not only is " I am asleep " not a possible *assertion*, it is also not a possible *judgement*. " In order to know that when a man said ' I am asleep ' he gave a true description of his own state, one would have to know that he said it while asleep *and* that he was *aware* of saying it. This is an impossible thing to know, because whatever showed that he was aware of saying that sentence would also show that he was not asleep. The knowledge required is impossible because it is self-contradictory." (pp. 10–11). " The sentence ' I am asleep ' cannot have a correct use to describe one's state and therefore it is not a vehicle for a possible judgement." (p. 14) " The proof that the sentence ' I am asleep ' cannot have a correct use as a present indicative, amounts to a proof that it cannot express a possibility " (p. 18).

The next step in the argument is to generalise this conclusion. Malcolm says that the argument which proves that it is impossible to make the judgement that one is asleep also proves that it is nonsensical to suppose that a person could make *any* judgement while asleep (p. 36). The logical absurdity of ' I am asleep ' is that it would be self-contradictory to verify that a man was both asleep and judging that he was, because whatever in his behaviour showed that he was making the judgement would equally show that he was not asleep. And this would be so whatever the judgement was (p. 36). The notion that someone is both asleep and judging is senseless in the sense that nothing can count in favour of either its truth or its falsity; the verification of such a notion is self-contradictory (p. 37).

This conclusion is further generalised in chapter 10. Not only judgements, but all mental activities, and even " passivities " like fear, anxiety, joy, illusions and hallucinations and images—all these are covered by the argument. The notion of anybody having any of these in sleep is senseless because its verification is self-contradictory (p. 37).

Now, from this thesis Malcolm's theory of dreaming follows simply. If there cannot be any mental activity or passivity in sleep, and if nevertheless dreams occur in sleep, it follows at once that dreams cannot consist of any thoughts or images or any mental processes occurring in sleep. But will it not follow from this argument that there are no dreams ? Malcolm says No. For, in order to establish that someone had a dream it is not necessary to prove that he had a thought or an image or what not while asleep; the criterion of someone's having had a dream is that upon awaking he tells a dream. Since then it is often established that someone had a dream, but nonsense to say that a thought, an image, etc. could have occurred in sleep, it follows that dreams cannot be mental processes taking place in sleep. "If it is theoretically impossible to verify that someone had images, say, in his sleep, but possible to verify that he dreamt, then dreams cannot be identical with, nor composed of, images experienced during sleep" (p. 51).

Two more points in Malcolm's theory need mention. (i) Since a dream is not an actual occurrence taking place in sleep a dream is reduced to the after-sleep impression of having experienced something during sleep. There is nothing, over and above the waking impression, which took place in sleep of which the impression is a "memory" or the report a description; no question whether there is correspondence between the dream and the impression can arise, because such a question would be meaningless. (ii) It also follows from Malcolm's theory that dreams cannot have any temporal location or duration. If a dream is not an actual occurrence at all, then the question of its temporal location or duration cannot arise.

The above is a brief summary of Malcolm's argument. I shall now proceed to examine it.

II

It is interesting to see how much is arbitrarily stipulated in the name of ordinary language in Malcolm's argument. (i) First, it is taken for granted that a state is to be called one of sleep only if "the behavioural criterion" of sleep is completely satisfied. This criterion is that during sleep a man's body is relaxed and motionless, his eyes closed and breathing regular, that he is unresponsive to various sounds and movements in his vicinity to which he would normally react if awake. From this stipulation it is then inferred that the state of a person having a nightmare is not sleep, but only "a phenomenon reasembling sleep".

(ii) Secondly, it is assumed that dreams can occur only during sleep as understood above. Form this it follows that nightmares and other dreams in which there is behavioural evidence of mental activity during sleep are not dreams " in the primary sense " of the term. His concept of dreaming as something which is not an actual occurrence and which has as its sole criterion the dreamer's after-sleep report follows easily from these stipulations. It would be interesting to enquire what grounds Malcolm gives for these stipulations; for unless some satisfactory grounds can be given his theory would be true only by definition.

If we attend to the ordinary use of the words " sleep " and "dream" we shall find that the two concepts, as ordinarily employed, are not at all well-defined. There are many kinds of dreams and in all of them the dreamer is regarded as a sleep. Malcolm tends to think that for a state to qualify as a sleep it must be absolutely devoid of behaviour. But ordinary language certainly recognises dreams in which the sleeper shows behaviour. In this class of dreams we may distinguish (i) dreams called nightmares and (ii) dreams in which there is not violent but mild behaviour. In the latter class I include dreams which are characterised by some behaviour, such as muttering, groaning, smiling, sighing, etc. as also Lady Macbeth's sleep-walking. (iii) Next, I shall mention dreams whose content is partially determined by external stimulation of the sleeper's body. We have all heard of the dream that one is walking through snow and ice, which one has when on a cold night his blanket slips from his feet and they are exposed to cold. (iv) I shall mention, next, dreams in which some problem of waking life is solved. a mathematical problem or merely a search for a lost article. The solution comes to the dreamer in the dream in the form of a worked-out example on paper or he sees the lost article in a particular place in the dream and on waking finds there. Such dreams have been reported by reliable investigators. (v) Last of all may be mentioned the drams which alone Malcolm is willing to recognise as dreams proper, viz. those in which there is total absence of behaviour on the part of the sleeper during the period in which dreaming is reported to have occurred. These are the dreams to which Malcolm's theory is intended to apply.

Before proceeding to comment on these various kinds of dreams I should like to make a comment on the last class of dreams

How do we know that there are *any* such dreams ? It would have to be shown that a man's sleep was completely devoid of behaviour at least in some cases in which having woken up he reported a dream. Whether any sleeper was thus carefully watched for the slightest behaviour by Malcolm or by anyone else he does not say; and I rather think that he merely takes for granted that there are such dreams. I think it is quite possible that every dream, even the quietest, has some slight behavioural expression; and while it may not be possible to prove this, I do not see any inherent impossibility in it. Of course Malcolm's argument has been designed to prove that this is never possible; but that argument is to be examined in the sequel. I am just now speaking from the point of view of common sense.

Coming back to the kinds of dreams listed above, it is clear that the first four kinds of dreams do not conform to Malcolm's theory. In dreams of classes (i) and (ii) there is clear proof of mental activity during sleep, an activity which is the dream. It would be absurd to suggest that the person who is in the throes of a nightmare and is screaming and struggling in his bed is not undergoing some kind of a frightful experience. And usually this person after awaking from the nightmare reports a terrible dream. If conclusive evidence of mental activity in dream were required, that of nightmares would certainly seem to be enough. But Malcolm disposes of nightmares unceremoniously by roundly denying that they are dreams. "Those violent movements and sounds", he says, "and the appearance of mental agitation diverge too far from the criterion of behaviour for sleep". (p. 28) And again "His state was however so unlike the paradigms of normal sleep that it is at least problematic whether it should be said that he was 'asleep' when those struggles were going on" (pp. 62–63). So Malcolm's verdict on nightmares is that they don't take place in sleep and so are not dreams proper. A person undergoing a nightmare is partially awake ! If this is not a case of arbitrary stipulation, it would be difficult to find one !

I think there is a clear evidence of activity during sleep in dreams of class (iii) also. If it is true that the content of a dream is partially determined by external stimulation it can hardly be denied that such a dream contains mental activity. But, for that very reason, Malcolm would deny that the person was asleep, responding to external stimuli being clear proof (he would say) of the person being partially awake. It seems to me nevertheless beyond doubt that the experience which such a person undergoes would be universally described as a dream. Malcolm's refusal to call it a dream is a case of redefinition in the interests of a theory.

Dreams belonging to class (iv) give further evidence of mental activity during sleep. Malcolm's refusal to grant mental activity here is bound up with his general refusal to grant mental activity in dreams. I shall, therefore, return to these dreams later.

It is then clear that Malcolm's theory is certainly not true of all dreams. Dreams belonging to classes (i) and (ii) have in addition to the waking report another criterion, viz. their behaviour in sleep. Normally these two criteria, viz. the report and the behaviour, mutually support each other. If a man who wakes from a violent nightmare reports a dreadful dream, we have a case of a dream which has both these criteria. Similarly, if a man, who shows some mild signs of mental activity during sleep, signs such as sighing, smiling, muttering the name of his sweetheart etc., reports on being woken up a dream which is in keeping with the behaviour, we have another case of a dream which satisfies both criteria. And it might be maintained that *all* dreams are of this kind. For how can we know that for every dream that is reported there was not in sleep some behaviour which agreed with the report ? I think that this is a real possibility and until we have refuted it we have no right to suppose that there are any dreams which have only one criterion, viz. the waking report, far less that all dreams are such. I think, therefore, that if it is granted, as I think it must be, that in some dreams at least there is mental activity in sleep, we have no right to suppose, without positive proof to the contrary, that this may not be true of all dreams. Indeed the principle of continuity would naturally incline us to believe that this is true of all dreams. This principle would suggest that dreams form a graded series, starting with nightmares at one end, passing through dreams in which there is less and less overt behaviour and ending with dreams in which there is no overt behaviour at all. In that case it would be arbitrary to hold that these last dreams form a totally different class and do not consist of mental activity in sleep. The more natural conclusion would be that even in these dreams there is mental activity; only it is so slight that it has no overt expression.

Nevertheless, of these last dreams Malcolm could hold that in the absence of any evidence of overt behaviour we are left with only the after-sleep report and that, therefore, his theory applies to these dreams at least. Let us, therefore, see whether there is not evidence of mental activity other than behaviour.

III

The answer that naturally springs to the lips is, " Of course there is such evidence ! Don't we *remember* dreams ? Isn't memory of dreams evidence of mental activity during sleep ? " But Malcolm says that the memory of a dream is not memory in the ordinary sense of the term. Ordinary memory requires an earlier experience which is recalled later, and the question of correspondence of memory with the original experience, i.e. the question of the truth or falsehood of memory, is significant. But in the case of a dream this question, Malcolm says, is meaningless. There is no question of a dream-report being faithful to the dream, because there is nothing beyond the waking impression to which the latter might or might not correspond. Malcolm quotes here the following passage from Wittgenstein. " The question whether the dreamer's memory deceives him when he reports the dream after waking cannot arise, unless indeed we introduce a completely new criterion for the report's ' agreeing ' with the dream, a criterion which gives us a concept of ' truth ' as distinct from ' truthfulness ' heie " (*Philosophical Investigations*, pp. 222–223). " When we think philosophically about memory ", Malcolm goes on " the following sort of paradigm comes most naturally tò our minds : I spoke certain words to you yesterday. Today I am requested to give an account of what those words were. The account I give is right or wrong. This is determined by whether it agree with your account and that of other witnesses, perhaps also by whether it is plaussible in the light of what is known about you and me and the circumstances of yesterday, and perhaps by still other things. But when I speak of ' remembering ' a dream there is nothing outside of my account of the dream to determine that my account is right or wrong. Since nothing counts as determining that my memory of my dream is right or wrong, what sense can the word 'memory' have here ?" (pp. 56–57). This argument is ingenious, but not, I am afraid, conclusive.

Why is the "memory" of a dream not remembering in the ordinary sense of the term ? Because in ordinary memory (i.e. memory of events experienced during wakefulness) there is possibility of verification whereas in the case of memory of dreams there is no such possibility. Let us consider these two points in order. (i) What kind of verifiability has the memory of a waking experience ? Malcolm's answer to this question is contained in the passage quoted above. As against it I want to maintain that in a sense there can be no verification for memory. Memory knowledge is ultimate in the sense that sense-experience can be admitted as evidence for or against it only if some other memory is called in to support it. Take the example given by Malcolm as the paradigm for memory. I spoke to you something yesterday and recall today what I said. This memory is verifiable, according to Malcolm. How ? Because you or some other persons who were present yesterday corroborate it or testify against it. But this is merely depending upon *their* memory. Again I shall not accept their testimony unless I am able to *recall* with their help what I actually did say. Similarly with records of past expreriences to which one might appeal in verification of a memory. The fact that I have made a note in my diary that I did or said or thought something yesterday would not prove that I did or said or thought that thing unless I (or somebody else) remember having made that note. It may be said that I might infer that I must have had that experience yesterday on the ground that I never make any but truthful entries in my diary; but how do I know that I never (or even usually do not) make untruthful entries in my diary unless I depend on my memory ? In short even in the case of the memory of a wakeful experience there is no verification save through some other memory. Unless all evidence of sense-experience is accompanied by memory, by the "impression" that I had this, that and the other experience, there is no verification of a memory claim. Sense-experience by itself cannot confirm or confute a memory claim; it is only sense-experience backed by some memory that can verify it. Memory is thus ultimate and self-certifying and in a sense unverifiable. If the principle of verifiability should declare memory to be meaningless on this ground, so much the worse, I would say, for the principle of verifiability !

The only difference, then, between the memory of a dream and that of a waking experience is that in the latter corroboration of one's memory by another person's is possible, whereas this is not possible in the case of dreams. But this may not be the peculiarity of the memory of dreams. Other people's memory can be appealed to in support or against one's memory only in cases where what is remembered is a *public* event. But suppose I now remember that I had a particular thought in the morning which I did not communicate to any one both because there was no one about and because I wanted to keep it to myself. Would it follow that this memory is not memory proper because it cannot be verified. Malcolm would say that being awake I *could* have spoken that thought to someone and so this memory is in theory verifiable. Consider the following case. Suppose that I am lost in some thought, so completely engrossed that I am almost "dead to the world". Suppose that after coming out of this state I recall a certain thought that came to me during that state. I had not spoken that thought to anyone, and it might be maintained that being completely engrossed in it I could not, even in theory, have expressed it to anybody else. Merely because this thought was not expressed and was not even expressible, would it follow that therefore my memory of that thought is not to be called a memory at all ? I am afraid this would be too arbitrary a proceeding.

Let us compare the phenomenology of the two rememberings. As far as one can see phenomenologically there is absolutely no difference between the two. Some details of the dream episode are remembered easily, others have to be recalled with some effort. Sometimes the report is altered in some respects. Effort brings back details which might otherwise have been lost. The experience is throughout that of careful scrutiny and failthful reporting. In both cases the scrutiny is retrospective; there is report of a dream only if retrospective attention reveals something, and the report tries to be faithful to that which is revealed. The fact that one sometimes wakes up with an impression of having dreamed and sometimes not is to Malcolm only a brute fact, not requiring any explanation, nor implying anything beyond itself. But the fact certainly requires explanation, and the only explanation which seems both necessary and sufficient is that an experience did actually take place in sleep. Malcolm's rejoinder to this is that "an 'explanation' explains nothing if it involves an unintelligible hypothesis. Nothing can count for or against the truth of this hypothesis. We can say either that there were experiences during sleep or that there were not, as we like. Whichever assertion we care to make, it can play no part in the daily employment of the concept of dreaming. 'A wheel that can be turned though nothing else moves with it, is not part of the mechanism' (Wittgenstein, *P.I.*, 271)" (p. 86)

I have been trying to show that the hypothesis in question is not unintelligible, and I shall say something more in what follows. And if it not unintelligible, it could not be said to explain nothing, or to be a wheel which could be turned though nothing else turned with it.

I shall say here something about the waking "impression" which would ordinarily be thought to point backward to the dream experience, but which Malcolm regards as a brute fact, incapable of explanation and requiring none.

IV

Malcolm's strange theory of dreaming requires him to give a very unplaussible account of the relation between a dream and the waking impression of that dream. Malcolm is at pains to say that the two are not identical, and even goes so far as to say that they are identical would be self-contradictory. But if they are numerically different, how are they related ? Malcolm's reply is that they are not logically independent in the sense that neither could exist regardless of whether the other existed. But if we accept Malcolm's theory it is difficult to see here *two* things which are numerically different. Since by dream we must not mean any occurrence which actually takes place during sleep what is there beyond the waking impression which is here being referred to as the dream and whose relation to the impression we are trying to investigate ? "Dreams occur during sleep" must, on Malcolm's view, be a false proposition, for the simple reason that there are no such occurrences. And yet Malcolm accepts this proposition as perfectly true. In the circumstances it is not easy to see how the numerical difference of the dream and the waking impression can be maintained. It seems to me that there being nothing beyond the impression, the two are identical. If this conclusion is self-contradictory, as Malcolm says it is (p. 59), it would be a very good reason for rejecting his whole bizarre analysis.

But let us waive this point and pass on to the next. Let us grant that a dream and its waking impression are two different things. How are they related ? Malcolm says they are not logically independent; i.e. it is impossible that one should have impression of a dream without having dreamt or that one should dream and not have the impression or report it later. But I think both these phenomena actually take place, especially the latter. (i) It is possible for a man to wake up with an impression of having dreamt and so find out later that he did not dream it but actually experienced it. (ii) Secondly, it might happen that a dream is not recalled. This may be shown in the following way. It often happens that a dream is recalled not immediately on waking, but several hours later. It is perfectly meaningful to say that if this man had been killed in the meanwhile, there would have been no recall of it. And it is certain that many dreams are just forgotten and never recalled. We cannot, therefore, maintain with Malcolm that a dream and its waking impression are not logically independent.

V

Is it true there can be no consciousness in sleep ? We have already seen that Malcolm so defines sleep that during it there can be no behavioural evidence of any thought going on in the sleeper's mind. But our ordinary concept of sleep is not so precise. By making it precise we might be able to draw exciting conclusions. But whether such arbitray definitions and the drawing of sensational implications from them has any interest for sound philosophy may be doubted. If we attend to our actual concept of sleep we shall find that it is quite complicated, and not easily definable. Nor do I intend to attempt to define it here. I shall merely point out here that the idea of thought taking place in sleep is by no means ruled out by our ordinary concept of sleep. And I shall cite, in support of my contention, two kinds of evidence : (i) selective responsiveness in sleep and (ii) dreams whose content is determined by external stimuli.

(i) It is a remarkable fact noted by psychologists that a sleeper while sound asleep and so unresponsive to normal stimuli can yet be readily roused from sleep by some comparatively slight stimulus. The whimpering of a child has this effect on the sleeping mother who is otherwise dead to the...... and similarly a doctor is said to be awakened by the first stroke of the clapper of his night-bell, while he is completely unresponsive to most other stimuli much more intense than these. This selective responsiveness is a clear indication of some kind of dim consciousness in sleep. Malcolm who refers to such examples in a slightly different context gives a different account of them. " It looks as if " he says, " the sleeper *heard* all of the sounds and *chose* to react to some but not to others. But this inclination is in error : the criteria for his having heard the other sounds —viz. his behaviour and testimony—are not satisfied. It is just a fact that a person who is sound asleep and therefore generally unaware of moderate noises and movements in his vicinity, can sometimes be wakened by some particularly slight noise such as the baby's whimpering " (p. 32). I am afraid, Malcolm's account of what this phenomenon looks like is somewhat strongly expressed. Those who think that this phenomenon indicates consciousness in sleep would not carelike to maintain that the sleeper *chooses* which sounds to react to. It would be enough to maintain that only some sounds rouse his interest. For this it is not necessary that he should have heard all the sounds well enough to have shown it in behaviour or to be able to testify. Similar phenomena are of common occurrence in waking life and there we do not insist on the criteria of behaviour and testimony to prove that there was selective attention and response. A man searching his friend in a crowd is not usually able to say who were all the persons over whom his eye roved till it came to rest on the person sought. He, nevertheless, sees all the people and passes them over till he comes upon his friend. For unless he saw a person he would not be able to decide that he was not the person sought. It would not be correct, therefore, to say that unless the criteria of behaviour and testimony were satisfied we could not say that a person's response was selective. Unless he could distinguish between his friend and others he would not know whom to ignore and whom to fasten upon, and he could not distinguish without looking at the person who was before him. For similar reasons the sleeper also would have to be declared as distinguishing between the one stimulus which awakens him and the others to which he remains unresponsive. (ii) Secondly, dreams whose content is partially determined by external stimuli can be cited as evidence of consciousness during sleep. Examples of such dreams have already been given in another context. Malcolm would regard such a state of a sleeper as one of partial awakedness. But this is a piece of arbitrary stipulation in the interest of a theory for which there is little justification.

Even the fact that a sleeper can be awakened from sleep by the use of strong stimuli, such as violent shaking, loud noises, pains, etc., can be cited as evidence of some kind of consciousness in sleep. If sleep were a state of complete lapse of consciousness a man could wake only when the cause of unconsciousness disappeared; just as a man who has been made unconsicious by the administration of ether comes back to consciousness only when the effect of the ether wears off. But he cannot be awakened by violent or painful stimuli; and neither could a man in deep sleep be awakened by these means. That he responds to violent stimuli is proof that there is some degree of consciousness even in deep sleep. We might, therefore, say that sleep is a state in which the threshould of perception is considerably raised; not that there is perception in it at all. Following Malcolm's line of thought one would have to say that all sleep is a state of partial awakedness—a conclusion whose absurdity requires no comment.

Amarawati **D. Y. Deshpande**

KNOWLEDGE AND TRUTH

When a philosopher undertakes to discuss the nature of truth, it usually happens that we very quickly find him talking about something else ......: linguistic meaning, perhaps, or the nature of knowledge. The reason for this is that the perfectly general question about the nature of truth is only too easily answered. Presumably we know what truth in general is if we know in general what it is for a statement or belief to be true. Well, a statement is true if and only if things are as one who makes that statement thereby states them to be. A belief is true if and only if things are as one who holds that belief thereby holds them to be. This answer is sometimes given the form of a schema : the statement or belief that *p* is true if and only if *p*. The schema covers every conceivable case of truth because it allows of any grammatically admissible filling. Thus if someone says that Peter is bald, what he says is true if and only if Peter is bald. If someone believes that 7 + 5 = 12, what he believes is true if and only if 7 + 5 = 12. And so on.

The answer is unassailable but frustrating. Surely in raising the general question we wanted something more substantial than this thin and trivial-seeming formula. Perhaps we wanted to know about the nature of those things—thoughts, propositions, statements or beliefs—which we call true or false. Or, hot for certainties as we are, perhaps, we wanted to know about the general conditions under which we may be said to *know* that one of these things is true. And so we find our philosopher turning to these other matters. In particular, recently, under the title of Theories of Truth, philosophers and logicians have been conducting investigations into the general types of *linguistics structure* by mastering which we are able to say and understand the true and false things we do say and understand.

This is not an unnatural turn to take. If it were not for language, truth would amount to very little, because thought would amount to very little—propositional thought, at least, the kind to which the notion of truth is appropriate. Beyond a certain not very advanced point, what we can't say we can't think. But our languages put at our disposal a limitless potential of thought. They do so because to understand a language is to know, in advance, the significance, of limitless sentences and combinations of sentences; even though we shall only ever use or read or hear a comparatively insignificant proportion of them. A central problem which confronts the theorist of meaning is that of explaining the individual language-user's understanding of the potentially limitless range of the sentences of his language. Evidently the problem cannot be solved at all without crediting the speaker with some kind of mastery of a structure of general rules or principles of combination of linguistic elements—Such a mastery, taken together with a grasp of a finite vocabulary of elements, [individually learned], must contain in itself the possibility of this limitless understanding. The specific problem for the theorist of semantic structure is to disclose the principles of combination involved and make clear their semantic force.

It might be questioned whether the title of truth-theory is appropriate to these investigations. But it is not inappropriate. For the central consideration in understanding the significance of sentences is a grasp of their truth-conditions. To understand a sentence is to know what thought it expresses or is capable, in given contextual circumstances, of expressing; and to know this is to know what we would be believing if we took that thought to be *true*. So the theorist's task can almost equally well be described as that of displaying the limited set of principles which generate the truth-conditions of the limitless sentences of a language.

Almost as well described; but not quite as well. I said that an inquiry into the nature of truth tends to turn, on the one hand, into an inquiry into the nature of meaning, on the other hand into an inquiry into the nature of knowledge. These are not independent inquiries. A theory of meaning must be, I have implied, a theory of understanding. It must not only show how the meanings of sentences are systematically determined by the meanings of constituent words and constructions. It must be able to show how we *understand* meanings as so determined. Understanding a sentence is knowledge of its truth-conditions. But the claim to know what the truth-conditions of a sentence were would be an empty claim if accompanied by a total disclaimer of the ability to recognize when those truth-conditions were fulfilled. More exactly, it would be nonsense to claim to know the truth-conditions of a sentence but to admit to having no idea what would justify one in either affirming or denying that the conditions were fulfilled. Now a general theory of the justifying conditions for affirming or denying propositions is just what has been traditionally understood as a theory of knowldedge. And so a theory of meaning points to a theory of knowledge. But it may, as I shall try to show, be a slightly misleading pointer.

Let me first return to our simple answer to the general question about the nature of truth. It might be said that the answer is not quite so empty as I suggested. Someone says or believes, say, that Peter is bald. What he says or believes is true if and only if Peter is bald. Does not this formula at least make the point that, as Austin once expressed it, it takes two to make a truth ? For the formula incorporates a two-fold reference : a reference, on the one hand, to a believing or a saying, on the other hand, to that in the world which the statement or belief is about. And it invites us to see the truth as consisting in a certain correspondence or fit between these two things. Moreover, at least in the case of a simple statement like ' Peter is bald ', we can give a quite precise sense to this notion of correspondence or fit—as a word-to-world relation. Such a statement fits the world—or its appropriate bit of the world—if the particular item referred to by the subject-term has the general characteristic assigned to it by the predicate-term. Or in other words : a statement coupling particular name and general predicate is true if and only if the named item satisfies the predicate. Of course not all statements are of this simple form. But any theory which sets out to show systematically how the truth-conditions of sentences of more elaborate construction are determined must be erected on the basis of precisely such simple forms as this. So such sentences lie at the foundation of a semantic theory of truth, a theory of meaning for a language.

And do they not also lie at the foundations of a theory of knowledge ? The ability to recognize some particular individual, perceptually encountered, as possessing some general characteristic seems, on the face of it, fundamental both to linguistic understanding and to knowledge in general. And it is just this simple form of sentence which is best adapted to recording such recognitions; though to be sure, this is not all the simple form is fit for. So, perhaps, we can represent the theory of knowledge and the theory of meaning as two aspects of a single theory, having a comon base or point of departure and yielding between them all that we can hope for by way of a substantial theory of truth.

However, caution is required. I want to mention two ways in which, if we are not careful, the embrace of these encouraging thoughts may lead us into error. I imagined someone finding it a merit of that simple formula I began with that it incorporated a twofold reference—to a saying or believing on the one hand, to that in the world which the statement or belief was about on the other; and hence envisaging truth as a kind of word-to-world correspondence, best understood in semantical terms. We might call this the realist interpretation of the formula; and my first point is that an incautious commitment to this interpretation, too simply understood, involves the risk of either adopting too narrow a conception of truth on the one hand or of falling into mythology on the other. We say that Peter is bald; that 7 + 5 = 12; that John ought to look after his sick brother; and so on. All these things we call true. And our thin formula, thinly understood, covers them all. We say and believe that 7 + 5 = 12; and 7 + 5 does = 12; so what we say and believe is true. But if we now impose the realist interpretation on our formula, matters are not so straightforward. We are in no difficulty with ‘ Peter is bald ’. There is Peter, his head but sparsely adorned with hair, an object in the world, visibly in a condition which fully satisfies the semantic condition for the truth of our statement. But what relations and dispositions of what things in the world make it *true* that 7 + 5 = 12 ? or that *if* Peter is bald, *then* Peter is bald ? Again, John and his sick brother are doubtless in the world; the former's activity of caring for the latter may so as well; but where in the world shall we find the relation signified by ‘ ought ’ ?

There are two well-known responses to these difficulties, both of which show the power of the realist conception of truth. One is to declare that mathematical equations, the tautologies of logic and moral judgments are not, strictly speaking, statements or propositions at all and hence are not, strictly speaking, true or false. They are to be assimilated, rather, to rules or imperatives. They relate to the ordinary natural world; but they relate to it, not as statements about it, but as recipes for action within it.

The other and opposite reaction is to embrace Platonism in mathematics and logic, and non-natural qualities in the sphere of morals. The philosopher who follows this course does not, like his opponent, limit the concept of truth; instead he extends the concept of reality or the world. He imagines or invents a realm of perfect immutable mathematical objects, the relations between which are simply reflected or mirrored in the truths of mathematics; or, as Moore did, he imagines a layer of non-natural qualities supervening upon the qualities or relations to be found in nature.

Both reactions are unsatisfactory. The first all too cavalierly ignores or overrides the coverage of the concept of truth that we actually have. ' It is true that *p* if and only if *p* '—the unassailable formula that we began with—is no less hospitable to moral judgments and mathematical propositions than it is to records of common observation or history or propositions of natural science. At the very least this fact calls for explanation. The second reaction does indeed offer an explanation. But the explanation it offers is spurious; and a spurious explanation is worse than none at all.

If both reactions are unsatisfactory and they share a common motivation, it is that common motivation which we must question. We must look with a critical eye at that realist conception, that simple notion of correspondence, which encourages one party to limit the extent of truth to what is thought of as the world and encourages the other party to extend the limits of the world to fit what is acknowledged as the truth. Not that we need abondon the simple realist conception altogether. Obviously there are some cases which it fits very well. We should rather take these cases as a starting point, as the primary or basic cases of truth; and then seek to explain how we intelligibly and properly extend the notion of truth beyond these limits and apply it to utterances which play a different and often more complex role in our lives and our thoughts.

Obviously I have not the time, even if I had the power, to undertake now a comprehensive explanation on these lines. I turn instead to another point at which caution is required—all the more so, perhaps, if we envisage such a progressive explanation of the coverage of the concept of truth. I spoke a little earlier of the capacity to recognize a particular situation or individual, with which one is perceptually confronted, as being of a certain general kind or as possessing a certain general character; and I remarked that this capacity seemed fundamental both to linguistic understanding and to knowledge in general. Fundamental to linguistic understanding; for how else should the basic connexions of meaning, the basic semantic links between word and world, be established? And fundamental to knowledge; for on what other basis could knowledge be developed, on what other *foundations* could the structure of beliefs which each of us counts as his knowledge of the world be erected ?

So at least we rhetorically ask. And so we are encouraged —or some empiricist philosophers are encouraged—to embrace a certain picture of knowledge in general. Consider those propositions which for any experiencing subject, at any moment, are just the propositions which might serve as reports of the results of his exercise of this fundamental capacity of perceptual recognition: reports, that is, of current observation. Surely these propositions must be as fundamental as that capacity. They must be the *foundations* of knowledge.

But now we must ask what this could mean. We must ask what is the doctrine that lies behind the metaphor. In the context of a particular argument or train of reasoning the metaphor of *foundations* has a clear sense. A man starts from certain explicit premises and makes certain implicit assumptions, and argues or reasons, on this basis, to his conclusion. His argument *is* a sort of structure which *rests upon* these premises and assumptions. They are taken as accepted before the construction begins and they have to remain in place throughout the process; if one of them is knocked out, the structure is in danger of collapsing. In such a particular argument or train of reasoning, then, there *are* foundation-propositions; propositions which serve as support for others and are not themselves at the moment regarded as in need of support.

Evidently in such a context foundation-propositions are not just of one special kind; they may be of any kind. The doctrine we are to consider, however, does not relate to particular arguments. It relates to knowledge in general. It seems it must be the dictrine that one special class of propositions, namely observation-propositions, constitute the *ultimate* evidential support, the *ultimate* reasons (or grounds or justification) for our accepting as true everything else we can properly be said to know.

It is still not wholly clear what this means. One thing it might mean is this : that when any person in fact knows some non-observation proposition to be true, then some observation-proposition constitutes the *reason*, or the *ultimate* reason, which that person actually *has* for believing the non-observation proposition.

Unfortunately this is a quite preposterous thesis. It is only slightly less preposterous if one extends the class of observation-propositions to include not only propositions stating what the individual currently observes, but also propositions stating what he can remember observing in the past. The thesis is preposterous in several ways. First, of all the things one knows, it is but an insignificant proportion of which one could truthfully say : my reason, or my basic reason, for believing this proposition is such-and-such an observation which I am either making now or can recall making in the past. Second, even when someone can cite an observation as his reason for believing some other proposition, it is normally a condition of its serving as a reason that the person in question should have other true beliefs which are not thus supported. (Thus my reason for thinking at a certain moment that my petrol tank is empty may be my current observation that the petrol gauge reads zero. But my ability even to make this observation, let alone appreciate its significance, depends on beliefs of mine for which current or remembered observation supplies no reason at all.) Finally, the thesis presupposes a picture of an individual's belief-system which is itself a gross distortion of the facts of mental life.

The picture is that of a kind of hierarchical structure of beliefs with higher members resting on lower members which are the individual's evidence for them or his reasons for believing them and lower members resting on still lower members until we come to the lowest level of all. But it is quite false that an individual's belief-system or set of beliefs is organised in any such way. This is not, of course, to say that members of an individual's belief-set lie entirely loose and separate in his mind, like items in a badly packed suit-case. On the contrary, they are *connected* in numerous and complex ways. But they are not organised like an argument or an army of arguments. Of many propositions it is true that the more securely fixed they are in one's belief-system, the less appropriate it seems to ask what one's reasons are for believing them. What are my reasons for thinking that my daughter's name is 'Julia', that the French for rabbit is 'lapin' or that Napoleon was defeated at Waterloo ? One might say : these are things I know too well to have *reasons* for believing.

As a picture of how an individual's belief-system is organised in his mind, the foundationalist thesis is, then, totally unrealistic.

Can we find for it any less unrealistic interpretation ? It is often remarked that none of our beliefs about the world and its working is in principle immune from challenge or question; and when any one of our beliefs is seriously questioned, any rational procedure for settling the question will normally involve putting ourselves in a position to make some relevant observation. So observation-propositions, it may be said, are at least the ultimate *check-points* of knowledge.

This is a more modest claim. Check-points are not foundations. Yet the impact of even this more modest claim is diminished once we realize that the observational check-points cannot function as such without assistance. Thus, many of the observations regarded as relevant to some disputed belief are observations that the observer could not even make, let alone appreciate the relevance of, were it not for the presence in his belief-system of many other beliefs or assumptions which are not themselves in question at the moment of observation. Again, the function of relevant observation, in the case of disputed belief, is very often simply to give the observer access to the past or present *belief* of someone else regarded as authoritative on the matter in question. That the observation in such a case achieves the desired result is itself a belief involving a quite complicated set of further assumptions and while we may grant that no proposition in our belief-system is in principle immune from question, yet we must note that almost any serious question, seriously asked in the shperes of history or natural science or practical affairs, presupposes an enormous framework or background of things taken to be known. In general, at any stage at which *reasons*, *criticism*, *inference* are in question, bodies of pre-existing knowledge or belief provide an indispensable background for these reflective operations; and it is against such a background that observation-propositions play their checking role.

Presumably we require of any theory of knowledge that it should give us a realistic picture of the general character of our knowledge-structures and belief-systems—including, or at least making room for, an account of how they develop and how they may rationally be modified. Such a picture must, of course, among other things, show how propositions of present and remembered observation fit in to the structure. So far the only truth about these propositions which we have been able to dig out from the ruins of the foundationalist metaphor is the rather specific platitude that when a seriously questioned belief is being checked, one has to make some observation, even if it is only a matter of looking at a text or listening to what someone says.

But there is a more general truth to be recovered from these ruins. Evidently the formation of the individual's corpus of belief —the formation of his world-picture—is the outcome of his exposure to, and interaction with, the world, including the training he receives from other members of his community; and evidently such exposure involves observation, seeing and hearing. At some point in this process there emerges the power of critical and self-conscious reflection. Perhaps we should not say that the individiual has a body of *beliefs before* this power emerges; certainly we should not say that this power emerges *before* he has a body of beliefs. As Wittgenstein put it : ' When we first begin to *believe* anything, what we believe is not a single proposition, it is a whole system of propositions. (Light dawns gradually over the whole.) ' But the point to be stressed now is the ongoing and continuous character of the individual's exposure to the world. At any moment, we may say, our knowledge (or belief) system has to accommodate the beliefs which our current experience *forces on us* at that moment. This may, and generally will, involve no strain; and, as already implied, what our current experience does force on us in the way of belief is a function of the character of the pre-existent system. But the necessity of this kind of accommodation to current experience is a necessity which is always with us; and always was with us, from the time when we could first be credited with beliefs at all; so that from that time onwards all subsequent states of our belief-system are the outcome of the ongoing process of accommodation to the unceasing pressures of experience.

These, then are the elements of truth which we can, and must, retain from the foundationalist thesis. Let me conclude by remarking that we can perhaps retain something else as well : not so much a theoretical insight as a practical precept : a caution against credulity; an encouragment to criticism; a reminder that though not *every* accepted belief or purported piece of information can be checked or tested against the evidence of our eyes and ears, some can be so tested and many should be. We cannot coheretntly question everything at once; a radical and all-pervasive scepticism is senseless; but one of the things we learn from experience is that selective scepticism is wise.

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THE PHILOSOPHY OF THE COPENHAGEN INTERPRETATION

The Compenhagen Interpretation of the wave-particle duality attempts to overcome the conceptual dilemma by taking the attitude that certain concepts in their classical sense are not contradictory but complementary in the sense that together they 'exhaust' the description of the phenomena under observation. "For this purpose it is decisive to recognise that however far the phenomena transcend the scope of classical physical explanation, the account of all evidence must be in classical terms.[1] All evidence must of necessity be expressed in classical terms but as in the case of quantum theory these concepts are to be used in a non-classical sense.

Bohr says, " We must renounce ascribing conventional physical attributes to micro-objects in an absolute way."[2] The application of the word " phenomena " i.e. what is under study, is now restricted " exclusively to refer to the observations obtained under specified circumstances including an account of the whole experimental arrangement."[3] It is asserted that this new definition of the concept of phenomena contains no arbitrary element but ". . . . is a part of the terminology inherent in quantum theory and expressing a situation of fact, i.e. a situation which is not of our doing, but which we have learned from experience ".[4]

An important principle, the Correspondence Principle, states that in the regions where the quantum of action (h) is negligible the laws of quantum theory are the same as those of classical physics. This principle which forms a bridge between classical and quantum theories is necessitated in the Copenhagen Interpretation (henceforth C. I.) because of the 'demand' that classical concepts be used to describe all experience. Classical concepts, within the framework of which the quantum of action cannot be comprehended, can, it is claimed, be reconciled to the quantum of action if a more 'liberal attitude towards these concepts'[5] is adopted. The Correspondence Principle, which according to Bohr arises out of regarding quantum theory as a 'rational generalisation of classical theories'[6], is thus based on the understanding that because of the smallness of the quantum of action, the classical concepts, if handled with caution, can be considered adequate to describe and explain the new experience. Allowing for the quantum of action, these concepts can be used in a manner which permits the description of any conceivable experiment in classical terms, so long as it leads to correct predictions.

For any such "rational generalisation" of classical physics, the wave-particle duality has to be considered a basic feature. Consequently, the wave and particle concepts are now to be used in their respective fields for their predictive use. The paradoxes that are given rise to by giving them a realistic interpretation are taken care of by stripping such concepts of this interpretation at least in the microscopic domain. This is done by introducing the stipulation that an observable be considered to exist in a system when, and only when, an observation of it is being made.

The concepts now cease to denote attributes of the system but fulfil 'their true logical function' which is "to express *relations* between the system and certain apparatus of entirely classical (i.e. directly controllable) character which serve to fix the conditions of observation and register the results."[7]

Classical concepts are now regarded as 'expedients which enable us to express, in a consistent manner, essential aspects of the phenomena'[8] free from any realistic interpretation.

Since a separation, even conceptually, of the "observed" and the "observer" is impossible, Heisenberg's Uncertainty Relations are neither theoretical nor objective. They can neither be surmounted by a theory at a deeper level, nor are they inherent in nature, for an autonomous world without observation is now "meaningless". They can only be interpreted as empirical indeterminacies which are irreducible and incontrollable traits of the results of observation.

The problem of explaining the states of two interacting systems is resolved by Bohr in a similar manner. During the interaction of A and B, the dynamical states of both A and B cease to be well-defined so that it becomes "meaningless", rather than "false" to ascribe a definite energy to them.[9]

"There is an undeniable similarity between the epistemological conclusion drawn in such a straightforward, unambiguous way from the peculiar character of the quantum laws, and the insistence of the early positivists on the essential part played by our sensations in determining our knowledge of the external world. This only means that, to that extent, the early positivist movement was a healthy reaction against the shallow metaphysics of mechanistic materialism. But why should scientists be made responsible for the later positivists' blundering into a metaphysics of their own ?"[10]

Rosenfold's remarks make it essential to examine the use of the word "meaningless". Does it contain any reference to our knowledge or observability ? Does it mean that intermediate states cannot be asserted to exist because they are not observed ? Does it refer only to the absence of predictability ? The term, used in any of these senses, leads to implications which are dangerously close to the philosophy of positivism.

• Feyerabend tries to attach a physical meaning to "meaninglessness" and warns us against drawing any positivist conclusions from it, which according to him, are not intended in Bohr's assertion; though he concedes that Heisenberg and others have adopted precisely this conclusion.[11] According to him it is not the term "meaningless", which leads to non-existence because of non-observability; it is the non-existence itself that is posited in Bohr's assertion. We shall show that this "non-existence" is a consequence of the positivist verification principle and its criterion of observability. Even if we concede Bohr's good intentions as a "realist" or "materialist", which Professor Feyerabend stresses, positing the non-existence of intermediate states, cannot save us from positivism.[12] For, if the non-existence of intermediate states is *a fact*, by itself, what is implied is an idealism greater than the idealism of positivism.

The question of the existence of micro-objects is rejected as "meaningless" where no empirical verification is possible even in principle. In the case of Bohr's assertion, the term "meaningless", in relation to the ascribing of definite energy to interacting states of a system, is used in the same sense. The inability to ascribe definite energies, i.e. the inability to find empirical verification for such states, is termed meaningless because such verification is "in principle" not possible.

Once the problem of intermediate states is overcome by postulating their non-existence the entire system of quantum mechanics as interpreted by Bohr becomes consistent. These problems arise only when we try to give a rational account of the processes of interaction in terms of classical mecahnics. Since the C. I. asserts that these concepts are inadequate means for describing the states of a system at micro level, we ought not, accordingly, retain the classical notions of wave, particle, position, momenta and such like, but should make them less specific. This leads to the conclusion that in the micro-world the question of the reality of what is not being observed (because it *cannot* be observed; not simply that we are not observing it) is meaningless. Since whether a " particle " behaves like a particle or a wave is dependent on the observation that we make of it, we can see that when no observation is being made it is meaningless to say whether the "particle" is a particle or a wave. Similarly,whether a micro-entity has a well-defined position or moments is again determined by the observation since in the quantum region " position " and " momenta " are not classical notions and micro-entities do not possess these properties in the classical sense. This leads to the conclusion that no statement ascribing any property to a micro-entity is true unless an empirical verification is actually carried out. This epistemological (i.e. dealing with the conditions of human knowing) assertion has been paraphresed by Mehlberg as the " principle of truth-indeterminacy of empirically unverified statements about micro-objects."[13]

As a consequence of complementarity and the uncertainty relations the probability of finding a particle in an appropriate place is given by the squared amplitude of the wave, when a position *measurement is made*. The obvious question, whether the system possesses the values of its physical attributes prior to the measurement or whether these are given to the system by the measurement itself, is answered by the C. I. in the form that micro-observables cannot be asserted to exist unless measured.

The C. I. extends this epistemological principle to ontological one, i.e. dealing with what there is. Heisenberg asserts that objective reality has evaporated. Physics has only to deal with observables. The concept of reality independent of observation has to be given up. Bohr, however, would maintain that this does not extend to the micro-observables. Here realism holds and the variables have sharp values irrespective of measurement.

The function, the probability function, is what defines, mathematically, the states of a system in relation to the measuring apparatus.[14] The system and the measuring apparatus cannot be visualised separately. This position of the C. I. has been brought out sharply because of the objection raised by Einstein, Podolsky and Rosen.[15] Einstein, Podolsky and Rosen suggested that the uncertainty is due to the interaction of the measuring apparatus with the observed phenomena and, therefore, in an hypothetical experiment, if it was possible to compute the position and momenta without this interference, uncertainty would vanish. Their argument is as follows. Let two systems, S_1 and S_2 interact with each other for a certain length of time. Let the states of this system be described by 1,2. Let the two systems now be separated spatially by a great distance so that they do not have any significant reciprocity. Now, if a measurement is made on S_1 the probability function corresponding to this (1) combined with the probability function of the whole system S (1,2), it would give entirely definite values to p^2 and q^2 of the system S_2. Einstein, Podolsky and Rosen, on the basis of this, suggested that either we say that it is not possible to make a measurement on a system without disturbing the combined system as a whole although they are widely separated, or else the assumption that the probability function gives the complete description of the physical system must be abandened. Bohr, dealing with this objection of Einstein, Podolsky and Rosen, argued as follows.[16] As soon as the measurement of p^1 is made in the system S_1 the interaction of the system with the measuring device would destroy any exact knowledge of q^1 and hence of q^2 (S_2) as well.

Thus in the C. I. the measuring apparatus and the observed object are to be considered as an indivisible system. They are "glued together", so to speak, by an indivisible quantum during the process of interaction. The quantum, belonging to both and yet indivisible, implies that the observing apparatus and the observed system cannot even conceptually be analysed into further parts.

Thus in no way can properties and qualities of the system under observation be described independently of those of the measuring device or the observing apparatus. To talk of the properties of a micro-object when it is not being observed is inconceivable in the C.I.. Since to talk of the properties of the micro-object when it is not being observed is " meaningless ", one must conclude that its only mode of existence is being observed.

The relational concept of the probability-function gives rise to a major difficulty. Where is the line to be drawn between the observing apparatus and the observed phenomena ?

The demarcation line between the observing apparatus and the observed phenomena is " to some extent arbitrary ".[17] In conformity with the Correspondence Principle, any inclusion of the observing device in the phenomena to be observed results in the study of a new more complex phenomena. This does not alter the situation regarding the results of the quantum theory so long as this new complex is in the microscopic domain which leaves the situation regarding quantum laws unalterable, because even this new, more complex, phenomenon has to interact with certain other measuring devices to make any sense in the quantum theory. If it thus becomes macroscopic then classical laws are applicable.

According to Heisenberg the demarcation or dividing line can be seen as follows :[18]

Schism in the investigation of atomic process—

Classical	*Quantum*
Plain concepts of space and time	Wave function in multi-dimensional configuration-space which allows no comprehensible interpretation
Measuring apparatus	Representation by probability function
Inter-relation defined by classical laws	Inter-relation defined by Schrodinger's wave equation

The effect of the means of observation on the observed body is conceived as disturbance, uncontrolled in the region of the dividing line and giving rise to the Uncertainty Relations and the statistical nature of the quantum laws. This serves as a " wonderful " method of linking up the classical and the quantum on either side of the dividing line where unambiguous formulations can be made. The dividing line is defined by the nature in classical and quantum domains. For this reason "there must, within certain limit, exist *complete freedom* in 'choosing' the position of the dividing line."[19]

The arbitrary choice of the dividing line and the relational character of the function give rise to the fact that the laws of micro-systems apply to macro-systems as well. Would, therefore, the unreality of the unobserved variables extend to the macro-domains also ? Within the C. I. this question is taken care of by the Correspondence Principle. According to this principle, for the phenomena in which Planck's constant can be considered negligible, the laws of quantum theory are approximately identical with the classical laws. This gives us the "happy" situation where the Uncertainty Relations do not assume serious proportions in the macroscopic domain.

The arbitrary nature of this macro-realism in the C. I. has been sharply posed in many cases. An interesting case is Schrodinger's Cat Paradox. Schrodinger imagined an isolated system consisting of an apparatus that contains a cat together with a device for electrocuting the cat. At a certain present time, an emitter emits a single photon directed towards a half-silvered mirror. If the photon is deflected then the cat will live; if the photon passes through the half-silvered mirror then the switch will be turned on and the cat will be electrocuted. The event of the photon passing through the half-silvered mirror is one whose quantum mechanical probability is exactly $\frac{1}{2}$. If this entire system is represented by a wave function then prior to the time at which the emitter emits the photon—say, 12 : 00—the wave that represents the state of the system will evolve in accordance with the classical limit theorems, that is to say, all macro-observables, including the ones that describe the behaviour of the cat, will retain "sharp values" "by themselves". When the photon is emitted, however, the effect of the half-silvered mirror will be to split the wave corresponding to the photon into two parts. Half of the wave will go through the half-silvered mirror and half will be reflected. From this point on the state of the system will be represented by a linear combination of two waves, one wave representing the system as it would be if the photon passes through the half-silvered mirror and the cat were electrocuted, and the other wave representing the state of the system as it would be if the photon were reflected and the cat were to live. Thus, if the system is not interfered with prior to 1 : 00 p.m., then we will predict that at 1 : 00 p.m., the system will be in a state that is a superposition of " live cat " and " dead cat ". We then have to say that the cat is *neither alive nor dead* at 1 : 00 p.m., unless someone comes and looks at it and that it is the act of looking that *throws the cat into a definite state*. This result of course, would be contrary to the macrophysical realism espoused by the C.I.. Schrodinger's Cat Paradox brings out the fact that the Correspondence Principle that " macro-observables retain sharp values at all times is not deduced from the foundations of quantum mechanics but is rather dragged in as an additional assumption."[20]

Such a situation which is not unusual in quantum mechanics raises the question of whether or not observation means "conscious" act of observation. Bohr has maintained, and most physicists have agreed with him, that the " subjective " or abritrary nature of the dividing line does not mean that the " uneality " present in the micro domain extends to the macro domain. In the macro domain, according to them, the macro-variables retain sharp values independent of observation.

On the other hand a number of physicists, notably London and Hoitler, maintain that the act of " observation " means a " conscious " observation, i.e. the observer appears " in his full capacity as a conscious being."[21] As a physicist holding this view unambiguously phrases it, "..the laws of quantum mechanics itself cannot be formulated..without recourse to the concept of consciousness."[22]

To throw out the subjectivist interpretation from the C. I. Heisenberg says that the probability function is a mixture of objective and subjective elements. " It contains statements about possibilities or better tendencies, (' potentia ' in Aristotelian Philosophy) and those statements are completely objective; they do not depend on any observer; and it contains statements about our knowledge of the system, which of course are subjective in so far as they may be different for different observers ".[23] According to Heisenberg " subjective " is not taken to refer to the psychology of consciousness of the observer, but to the measuring device, which is macroscopic and essentially linked with the microscopic. But it is subjective in the sense that the measuring device has been constructed by the observer and on this construction depends the type of "reality", or the manifestation of it—whether particle or wave—, that we study. In other words, "what we observe is not nature in itself but nature exposed to our method of questioning."[24]

"The probability function does not allow a description of what happens between two observations. Any attempt to find such a description would lead to contradictions; this must mean that the term "happen" is restricted to observation."[25] This restriction can be the result either of the limitations of scientific development so far, or of the fact that nothing happens between observations, in which case the question is meaningless. The only consistent answer within the C. I. is the second, the positivist one, i.e. it is observationally and therefore conceptually a meaningless question. In true positivist spirit reality is observer or obeservation dependent.

Various implications follow. What we deal with are not the properties of micro-objects as such, but rather the relationships that hold amongst observable large-scale phenomena. Thus, science is no longer a study of nature in itself but is the study of our sense impressions—their structure, ordering, co-relation, and regulations.[26] This is sharply put by Philip Frank: "In the technological use of science we have to connect general laws with statements about sense impressions. Hence every conclusion drawn from physical laws can only be a statement about sense observations of physical facts."[27]

The success of quantum mechanics is due to the fact that its mathematical formalism gives correct predictions for observables. The function gives the probability for finding a definite physical magnitude in a definitely given interval. This probability is empirically determinable—it permits the description of the mean behaviour of a statistical aggregate of systems.

Quantum Mechanics answers properly put statistical questions. This has led the adherents of the C.I. to consider the sole purpose of science to be the making of reliable predictions of events as yet unknown. This attitude is expressed by Bohr in his arguments with Einstein, saying that there could be "no other way to deem logically consistent mathematical formalism as inadequate than by demonstrating the departure of its consequences from experience or by proving that its predictions did not exhaust the possibilities of observation..".[28] The positivist attitude to the function of science is apparent in the understanding "that the appropriate physical interpretation of symbolic quantum mechanical formalism amounts only to predictions, of determinate or statistical character."[29]

An assumption underlying the interpretation of the Copenhagen School is that the present day quantum mechanics is a rational summary of facts and that any further theory must also be so. The interpretation is taken to be a 'unique' interpretation, "Now, quantum theory eminently possesses this character of uniqueness; every feature of it has been forced upon us as the only way to avoid the ambiguities."[30]

This assumption is the basis of the assertion that the duality of particles and waves which arises due to the use of classical concepts cannot be overcome. The propounders of the C. I. repeatedly emphasize that our experience must be described in classical notions which are said to be either "intuitively given" or "inborn".[31] Any possibility of the search for a more complete conception is renounced "in principle".[32] Apart from the qualitative argument of Bohr for expressing all evidence in terms of classical concepts, there is Von Neumann's proof according to which any further theory of the microscopic domain which tries to get fuller descriptions of its phenomena in terms of "hidden variables", i.e. variables not known thus far, is ruled out.[33]

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NOTES

1. Bohr N.; *Einstein: Philosopher-Scientist* ed P. A. Schilpp, Discussion with Einstein p. 200.
2. Ibid p. 238.
3 Ibid p. 238.
4. Rosenfeld : *Observation and Interpretation* ed. S. Korner-Misunderstandings about the foundations of quantum theory, p. 42.
5. Bohr N.; *Atomic Theory and Description of Nature*, p. 5
6. Ibid p. 70, 110.
7. Rosenfeld; op. cit. p. 42.

8. Bohr N.; op. cit. p. 12.

9. Feyerabend P. K., *Frontiers of Science and Philosophy ed. R. G. Colodny,* Problems of Microphysics p. 196.

10. Rosenfeld; op. cit. p. 44.

11. Feyerabend P. K.; op. cit. p. 196 see f.n. 39.

12. Feyerabend's effort to show Bohr's materialist intentions has the following consequences :—

(1) Bohr strictly (or not so strictly) adhered to the scientific method and was himself reluctant to draw any hasty ontological inferences from formalism. He was fully aware of the approximate and pragmatic nature of quantum mechanics formalism.

(2) He used subjectivist terminology less frequently than Heisenberg and there are differences between him and Heisenberg on the acceptance of a pure positivist interpretation of Physics.

(3) He was aware of the limited applicability of the results of quantum mechanics, both in terms of the historical development of science and in terms of the domain of the applicability of such laws.

(4) He would not be averse as a " philosopher " to the discovery of new domains or contexts in which different laws might apply. This is indicated in Feyerabend's characterisation of Bohr's attempts as a return to Bohr.

13. Mehlberg H.; *Quantum Theory and Reality ed. Mario Bunge.* The problem of Physical Reality in Contemporary Science pp. 45–65.

14. Heisenberg holds the view that only such experimental situations can arise in nature as can be expressed in mathematical formalism. See his *Physics and Philosophy* p. 4 ; Michael Polanyi asserts that " it appears that the predominant principle that shaped modern physical theory was not the positivist programme, but the transition from a mechanical conception of reality to a mathematical conception of it, which sometimes coincided with the positivist programme for the purification of science ". (*British Jr. of Philosophy of Science 18* (*1967*) : Science and Reality pp. 177–193.)

Our attempt is to show that in the C.I. this mathematical transformation is not a case of occasional coincidence but is a consistent development along positivist lines.

15. Einstein, Podolsky & Rosen : *Phy. Rev.* 47 (*1935*), Can quantum-mechanical description of physical reality be considered complete ? pp. 777–783.

16. Bohr. N.; *Einstein : Philosopher–Scientist* Discussion with Einstein p. 232.

17. Heisenberg : *Physics and Philosophy*, p. 57.

18. Heisenberg : *Philosophical Problems of Nuclear Physics*. pp. 54–55.

19. Ibid.

20. Hilary Putnam : *Beyond the Edge of Certainty ed. Colodny*, A Philosopher looks at Quantum Mechanics p. 95.

21. Heitler W.; *Einstein : Philosopher-Scientist* The Departure from Classical Thought in Modern Physics p. 194.

22. Wigner E. P.; quoted by Popper, K : Quantum Mechanics without "The Observer" *Quantum Theory and Reality*.

23. Heisenberg : *Physics and Philosophy* p. 52.

24. Ibid.

25. Ibid p. 54.

26. '... in our description of nature the purpose is not to disclose the real essence of the phenomena, but only to track down, as far as it is possible, relations between the manifold aspects of our experience'.

N. Bohr; *Atomic Theory and the Description of Nature*, p. 18.

27. Philip Frank; *Science and Society ed. Vavoulis and Colver*; Philosophical Uses of Science p. 142.

28. Bohr, N.; op. cit.

29. Bohr. N.; op. cit. p. 238.

30. Rosenfold; op. cit.

31. Heisenberg; *Science and Society*; Plank's Discovery and Philosophical Problems in Nuclear Physics pp. 111-112.

32. '... in quantum mechanics we are not dealing with an arbitrary renunciation of a more detailed analysis of atomic phenomena, but with a recognition that such an analysis is in principle excluded :

N. Bohr; *Einstein : Philosopher-Scientist* p. 235.

33. In essence the proof consists in the derivation of two theorems, the first asserting that no ensemble of quantum mechanical systems is dispersion-free, and the second asserting that the ensembles of minimum dispersion are such that anyone of its finite sub-ensembles possesses the same properties as it itself.

Von Neumann; *Mathematical Foundations of Quantum Mechanics.* In this proof, unlike Bohr's argument, both the observed system and the observing device are described with the help of a function. The proof is based on taking certain results from quantum theory and its interpretation as final and then goes to prove that it is so.

HEGEL AND INDIAN PHILOSOPHY

The principle of dialectical evolution as laid down in Hegel's *philosophy of history*, and applied to the *history of philosophy*, requires of the philosopher to " conceive the diversity of philosophical systems as the progressive evolution of truth ", as " stages which are not merely differentiated, but supplant one another as being incompatible with one another. But the ceaseless activity of their own inherent nature makes them at the same time moments of an organic unity, where they not merely do not contradict one another, but where one is as necessary as the other, and this equal necessity of all moments constitutes alone and thereby the life of the whole."[1]

Hegel expounds this organic emergence and concrescence of philosophical systems by a metaphor analogous, at the first glance, to the *biological principle of causality* in Indian philosophy—*karma-vipākaṁ*, or the ripening fruit : " The bud disappears when the blossom breaks through, and we might say that the former is refuted by the latter; in the same way when the fruit comes, the blossom may be explained to be a false form of the plant's existence, for the fruit appears as its true nature in place of the blossom."[2]

Yet, at a closer scrutiny, this analogy with the Indian conception of *karma* reveals essential differences in its own contexts, first of all in the historical compass of its application. An implicit explanation of this diversity can be found in modern Indian philosophy in Aurobindo Ghose's criticism of the European theory of evolution.

From the viewpoint of the Indian doctrine of cyclic development, " mental life, far from being a recent appearance in man, is the repetition in him of a previous achievement from which the Energy in the race had undergone one of her *deplorable recoils* " due to which " the savage is perhaps not so much the first forefather of civilized man as the degenerate descendent of a previous civilization ", and " barbarism is an intermediate sleep, not an original darkness."[3]

Hegel's philosophy of history emerged, in the first half of the 19th century, from the overshadowing authority of a much more primitive, optimistically superficial world-view of the Bible, where the whole development of God's benevolent creation of all Being out of Nothing was contracted to a straight ascending line of rapid evolution within the span of a few millenia. There was neither space nor time enough left for such retrospective recoils as envisaged by the incomparably larger Indian tradition, not only in the negative direction, singled out for the purpose of Aurobindo's specific comparison, but also in positive aspects of cultural rebirths, personified in the idea of *avatārs.* Modern criticism of Hegel, as I shall try to show in the sequel, could not oversee this shortcoming in its various aspects.

The same Biblical authority remained the basis for chronological orientation of the classicist belief in " the Greek wonder " of a high culture arising with equal rapidity out of nothing—a belief predestined to confirm the pre-established harmony/at least in the synchronization/of the Homeric with the Biblical myth. In the middle of the 19th century, " the dispeller of the phantom of the East ", E. Zeller, the highest German authority for Greek philosophy, " was successful in silencing, for a longer time, the voices of those who were looking for the origin of the Greek philosophical thought in the East." He could proclaim that " sober historians have looked in vain among eastern nations for traces of a higher culture which allegedly should have adorned the early period of the human race ", so that " the spectre of the East began to reappear only in the second half of the ' seventies '."[4]

Hegel's dialectical speculation was an analogous endevour to show how the entire historical process of world-cultures was drifted by the " Absolute Spirit ' in one direction only, and whatever was overtaken once in the dialectical process of its " moments ", was forever exiled in the past.

In connection with our subject it was observed recently by P. Tillich[5] that " e.g. Buddhism is considered by Hegelian dialectic as an early stage of religious development already completely superseded by history "—while today we have still/or again/to consider it as a living religion of considerable relevance for the western world/as strongly emphasized already by Nietzsche[6]/.

In his lectures on the history of philosophy[7] Hegel decided that " Eastern philosophy has to be excluded, because the East has not yet attained to the knowledge of freedom of the subject, a knowledge indispensable for philosophizing ", while specifically " in the Indian philosophy the Idea has not yet attained objectification. Therefore the outward objectivity is not understood in accordance with the Idea. This is the shortcoming of orientalism ". As a consequence Hegel summed up his poor view on Indian religion on two pages of " The Phenomenology of Mind " as a cult of " plants and animals " :

" The actual self-consciousness at work in this dispersed and disintegrated spirit takes the form of a multitude of individualized mutually antipathetic folk-spirits, who fight and hate each other to the death, and consciously accept certain specific forms of animals as their essential being and nature/footnote : Sacred animals in Indian religion/ : for they are nothing else than spirits of animals, or animal lives separated and cut off from one another, and with *no universality consciously present* in them. " Thus it is a religion, or rather a state of mind, of a " self-consuming self, i.e. the self that becomes a " thing ". .self-existence put forth in the form of an object."

Hegel's picture of Indian philosophies and religions remained until a few years before his death limited to such inadequate information about popular cults representing in the Indian Pantheon a medieval revival of degenerate remains of proto-historic religious traditions, which never could be thoroughly suppressed by Vedic culture of the later Aryans. Though since 1822 he had to dedicate more attention to " The Eastern World " in his " Lectures on the Philosophy of world History "[8], his Europocentrist judgment on the racially inferiour value of the Indian and Chinese cultures was not changed until 1827, when the acquaintance with the Bhagavad-gītā provoked a dialectical turning of his own position and brought him to the opposite extreme.

Bhagavad-gītā in the light of Hegel's philosophy

Hegel died in 1831, at the age of 61, of cholera in Berlin. Only four years before his death his depreciation of the spiritual world of ancient India was changed under the influence of the first German translation of the Bhagavad-gītā. The translation was introduced by a comprehensive essay on the religious and philosophical heritage of India by W. von Humboldt. Hegel dedicated to this event an extensive and enthusiastic comment, covering 75 densly printed pages in the "Jahrbuch für swissenschaftliche Kritik", Vol. XVI, 1827[9]. The change in his attitude was affirmed in statements as the following :

"The difference of the aim peculiar to both sāṁkhya and yoga, and especially of the path leading to that aim, from any religious formation has been elicited by thought and for thought to such an extent that it deserves, beyond any doubt, to be called philosophy."—Hegel further recognizes to Indian philosophy "a higher ascent" and even the attainment of "the most exalted depth"/*die erhabenste Tiefe*/..where activity is absorbed by knowledge, or, more precisely, by abstract penetration of the consciousness in itself. —"Praiseworthy is the sublimity of the event that Indians have attained such detachment of the non-sensuous from the sensuous, of universality from empirical multiplicity..and thus risen to the consciousness of the sublimity of thought."

An enthusiastic student of Indian philosophy, trained in a western neo-Hegelian school, asked me once what repercussions might this belated pro-Indian turning have caused in the revision of Hegel's system, considering that at the time of his death he had just commenced to prepare a new edition of his main work, "The Phenomenology of Mind", written 25 years earlier. I would not have expected any surprising change in the basic work of this most spectacular of all modern European philosophers. Most probably, in the part dedicated to the dialectical development of religions, Indian religions would have been honored with a better place at a more advanced stage of the development of the Idea, after, and not any longer before, the attainments of the Egyptian "artificers"[10]. This would also correspond better to modern archaeological theories. He might even have realized that some of his romanticist praises of "the abstract work of art" in Greek religion might more adequately be applied to typical attributes of the Vedic *gāyatri*, e.g. :

"This principle of the Cult is essentially contained and present already in the flow of the melody of the Hymn. These hymns of devotion are the way the self obtains immediate pure satisfaction through and within itself. It is the soul purified, which, in the purity it thus attains, is immediately and only absolute Being, and is one with absolute Being."[11]

The reader who approaches Hegel's Phenomenology from an Indian bias would hardly overlook another "moment" where Indian Philosophy could have been better inserted, in the chapter on "Conscience"[12], suggesting an astonishing coincidence of an essential motive of Hegel's moral philosophy with the central theme of Bhagavad-gītā. It is the motive of "renouncing all semblances and dissemblances characteristic of the moral point of view, when it gives up thinking that there is a contradiction between duty and actual reality. According to this latter state of mind, I act morally when I am conscious of performing merely pure duty and nothing else but that."

Considering Hegel's references to the "national spirit"[13] re-emerging on salient points of the whole range along the dialectical periple described in his philosophy of history, the exposition of the moral problem in this historical "moment" could be exemplified most adequately by Arjuna's episode and the place of Bhagavad-gītā in the course of events related in the Mahābhārata. What follows could consequently be understood as a modern commentary to the basic text :

"Looking more closely at the unity and the significance of the moments of this stage, we find that moral consciousness conceived itself merely in the form of the inherent principle, or as ultimate essence [Kṛṣṇa]; *qua* conscience, however, it lays hold of its explicit individual self-existence, or its self [Arjuna]. The contradiction involved in the moral point of view is resolved i.e., the distinction, which lay at the basis of its peculiar attitude, proves to be no distinction, and melts into the pure negativity. This process of negativity is, however, just the self : a single simple self which is at once pure knowledge and knowledge of itself as this individual conscious life,....for it is something actual and concrete, which no longer has the significance of being a nature alien to the ultimate esence, a nature independent and with laws of its own....Further, this self is, *qua* pure self-identical knowledge, the universal without qualifications, so that just this knowledge, being its very own knowledge, being conviction, constitutes *duty*. Duty is no longer the universal appearing over against and opposed to the self."[14]

Thus, we might say, in Hegelian terms, Kṛṣṇa raises Arjuna's consciousness to the level of a higher conscience. In Hegel's words this difference of level, or the vantage-ground, in facing the dramatic event, is defined as following : " While the 'honest consciousness' is for ever grasping merely the bare and empty 'fact itself', conscience, on the other hand, secures the 'fact itself' in its fullness, a fullness which conscience of itself supplies."[15]

I hardly could resist the impression that a post-Hegelian western interpretation of the Gītā, by G. Santayana in his " Apologia pro mente sua "[16], were not unaware of the same Hegelian analogy :

" Another version of the relation between rational and post-rational morality may be found in the Mahābhārata, in the well known scene where two armies face each other with drawn swords, awaiting the signal for battle. But the prince commanding one oı the armies has pacifist scruples, which he confesses to his spiritual mentor—a god in disguise—in the most eloquent words I have ever read on that theme..The tender prince must live the life appointed to him, he must fight this battle, but with detachment.. The version has the advantage of not separating natural virtue and spiritual insight into two different lives or two standards of action or interest : *the two may be lived together and in the same moment.*"

Whatever importance we may attribute to such possibilities of better synchronization of some specific " moments " in the history of world cultures, I doubt that Hegel's discovery of Bhagavad-gītā could have caused any essential change in the basic structure of his philosophy of history. Hegel was the first modern philosopher who envisaged world evolution as an integrated *historical* process, and for that reason the first philosopher of culture, since culture is the exclusive prerogative of spiritually informed consciousness/in the historical meaning attributed to the term " Spirit " by Hegel, later more and more frequently substituted by the term " Culture "/. Yet, later criticism is almost unanimous in rejecting/at least in its ultimate consequences/the absolutist claim of Hegel's system to encompass the historical event of manifestation of the " Absolute Spirit " within its one-dimensional structure, closed both in time and space into one a teleological unit. Absolutist tendencies in earlier philosophies/which again might have been discussed on amore adequate level with the Advaita-Vedānta than alleged in the earliest phases of Greek cosmological speculations/were dismissed by Hegel as premature abstractions of a primitive understanding, which "just because they are the first, have least in them, " as, e.g. " the initial definition, the most abstract and sterile,. . given by the Eleatics ", who " enunciate Being as a predicate of the Absolute "; or in the case of Pythagoras, whose " fault in the language of modern times would be described as an excess of idealism "; or " as the abstract independence of Stoicism ", before its " principle of the sphere of right—an independence devoid of the qualities of spirit "—was developed into " an explicit concrete world "[17], etc.

It is noteworthy also to single out, as a characteristic reference to the " Orient ", that essentially the same reproach is implied/ at the end of Phenomenology[18]/in Hegel's objection against Spinoza for having " expressed in an abstract way the immediate unity of thought and existence, of abstract Essential Reality and Self", and thus " expressed the primal principle of ' Light ' in a purer form, viz. as unity of extension and existence—for ' existence ' is an ultimate simple term more adequate to thought that ' Light ' —and in this way has revived again in thought the substance of the Orient; thereupon spirit at once recoils in *horror from this abstract unity*, from this selfless substanciality, and maintains as against it the principle of Individuality ". What horrifies Hegel here is still better expressed in his Logic with reference to the "limitation" of Spinoza's abstract notion of God : " That God is the absolute Person however is a point which the philosophy of Spinoza never perceived; and on that side it falls short of *the true notion of God* which forms the content of religious consciousness in Christianity." Therefore his " Oriental view of the unity of substance. .is still not the final idea. It is marked by the *absence of the principle of the Western World. .*", a principle by which Hegelian philosophy remains culturally limited still today[19].

From the same historical bias Hegel considered it to be the advantage of his closed system to finalise also the " concrete Idea " of the ultimate attainment allowed to be reached by the "Absolute Spirit " in the " Absolute Notion " of his " Absolute Knowledge". The access to " Absolute Knowledge " is allowed only to " the Spirit manifested in revealed religion "[20], in absolute exclusiveness of Hegel's concretising interpretation of his own Christian creed—an idea foreign not only to pre-Hegelian criticist philosophy/the Kantian intention rejected by Hegel/, but also to the deeper Indian conception of Brahman/even when interpreted, more or less uncritically, with the Hegelian analogon of " Absolute " by modern Indian exegets/.

Though Hegel's dialectical interpretation of Christianity has not been brandmarked as heresy but rather favourably received by several Protestant theologians still in the 20th century/K. Barth/, it could by no means and now here satisfy the requirements for a new " method of dynamic typology "/Tillich/, postulated by our existential interest in dialogues between religions on the actual point of intersection of their common lot within desintegrating world cultures. The vantage ground wherefrom they have to face now their specific responsibilities for failures of their exclusiveness in establishing historical *ends* to their cultural perspectives; ends imaginable almost as engulfments in the abyss of The Absolute–this is the meeting place of their actual dialogues, where they are all ultimately aware of being " on the same level ".

It should appear obvious by now that on this dialectical turning point in the history of world-cultures Hegel's Europocentric absolutism/as elicited in the Phenomenology/can serve only as a model of the fatal error of applying indiscriminatedly the principle of dialectical 'sublating' and 'superseding' on divergent types of cultural actuality in useless efforts to congeal the authentic dialectical dynamics/even in the process of one's own cultural history/through absolutization, instead of considering the luminous points of such other constellations as focuses of the same 'eternal now', and phenomena of the same *sanātana dharmaḥ* or 'perennial philosophy'. In view of this basic mistake in the direction of Hegel's dialectical thought, pruning 'flaws'/ in the bad manner of English logical empiricism/concerning, e.g., the position of rank to be recognized to single " moments " of historically superseded curiosities, such as *was* the Indian share in the responsibility of the " Orient " for the " horror " which drove the European " spirit at once to recoil from this abstract unity " of an impersonal Absolute —all this could be of no avail for a constructive dialogue in the actual encounter of world religions. The same criterion of existential actuality has been recognized as valid in comparative philosophy in the post-Hegelian era ever since Schopenhauer, Nietzsche and Deussen in European philosophy, and Aurobindo and Radhakrishnan on the Indian side of the same universalist movement.

The inadequacy of dialectical absolutism in Hegel's closed system to the spirit of Indian philosophy will be pointed out in the sequel in a few critical and symptomatic examples.

Hegel's interpretation of the Buddhist theory of nothingness /*śūnya-vādaḥ*/

Hegel's Logic, in the "Encyclopaedia of the Philosophical Sciences", published in 1817 / ten years after the "Phenomenology" /, contains a very characteristic direct reference to Buddhism, considered still today to form the central conception of Buddhist philosophy : its theory of nothingness/*śūñña-vādo* in basic Pāli texts, *śūnya-vādaḥ* in later Sanskrt literature/. In sections 87–88/ Ch. VIII, "First sub-division of Logic—The doctrine of Being"/, at the beginning of his discussion on the dialectical aspects of two antithetic definitions of the Absolute : "The Absolute is Being", and "The Absolute is Nothing", Hegel finds in the latter definition first a Kantian aspect : "In fact this definition is implied in saying that the thing-in-itself is indeterminate, and so without either form or matter." But, in its ultimate consequence, Hegel realizes that it means "making, as the Buddhists do, Nothing the principle of all things, the final aim and end of everything". At the end of the same section /87/, Hegel reverts to another aspect discussed in the same context, concerning "those who define God to be mere Being; a definition not a whit better than that of the Buddhists, who make God to be Nought, and who from that principle draw the further conclusion that annihilation is the means by which man becomes God". The following section /88/ begins with the synthesis containing the dialectical solution : "The truth of Being and Nothing is accordingly the unity of the two : and this unity is *Becoming*."

In Buddhist philosophy the principle of becoming is recognized and elicited within the wider frame of Buddho's teaching on impermanence /*aniccaṁ*/, the first of three primeval characteristics /*lakkhaṇaṁ*/ of all existence.[21] The agreement with Hegel on this point can be formulated from the Buddhist stand-point in following terms :

Being and Non-Being are sublated, or synthetized, in the relativity of Becoming, and thus *de-absolutized*. In this formulation the accent is laid on two terms, in which the basic Buddhist doctrine of impermanence differs from Hegel's doctrine of becoming:

/1/ Hegel's designation of " nothing " is replaced by " non-being ".

/2/ The sublation in the synthesis is considered as the *ultimate negation of the Absolute*, in any whatsoever dialectical or trans-dialectical involvement or ontological status. The dialectical process ends with the negation of the Absolute. The Buddhist, though admitting the level of rational synthesis in dialectic, does not agree that, by the same logical necessity, to the admitted relativity of being and non-being there should correspond the postulate of an absolute conterpart/not even a " negative-Absolute ", as we shall see in the sequel.

The importance of our first difference in terms /1/ consists in the thesis that ' nothing ' /*suññaṁ* or *śūnyaṁ*/ in Buddhism is the opposite of the Hegelian Absolute, and *not* applicable to the mere polarity of being : non-being. As to this latter, its existential import is eliminated by the basic principle of Buddhist logic, the principle of *catu-koṭi* (tetralemma), according to which " neither being, nor non-being, nor both being-and-non-being, nor neither being-nor-non-being " can express the existential purport and content of human reality. No derivate from the verb ' to be ' can adequately express the immediate intuition /*vipassanā*/ of existence, or the essence of actuality /as *paramattho* or ultimate purpose/.

On the transcendental level /*āyatanaṁ*/[22] where the term *śūnyatā* has to be properly applied, *Nothingness is not the opposite of Being*. The opposite of Being is simply Non-Being/though implicitly only within the relativistic frame of *catu-koṭi*/. The distinction between nothingness and non-being has been very carefully expounded already in the earliest Pali texts. It is the distinction between the *principle of śūnyatā*, accepted by Buddho and elaborated by later Buddhist philosophers since Nāgārjuna /*not* in their capacity of followers of popular Mahāyāna religions/, and, on the other hand, the *uccheda-vādo* theory of ' destruction ' or destructibility of the world substance, a *materialistic* belief in Being, in extreme opposition to the ontological nihilism in the *idealistic* philosophy of *śūnya-vādaḥ*. This antithesis, emphasized in several discourses of Buddho in the Pāli Sutta-piṭakaṁ, is worthwhile being quoted here in order to dispell both later "commentarial developments" under the influence of misunderstood Indian heterogenous traditions and modern philosophical attempts of interpreting *śūnya-vādaḥ* /especially with reference to Nāgārjuna's basic work, Mādhyamaka-kārikā/ in more or less explicitly Hegelian terms.

In the *Yamaka-suttaṁ* /S.XXII, 85/[23], Yamako, who has misunderstood the teaching of Buddho on the nothingness of "the world in itself and for itself" /*attena vā attaniyena vā suñño loko; S.XXXV*, 85, *Suññata-loka-suttaṁ*/, is refuted and converted to the *suñña-vādo* in its proper meaning, as follows :

Yamako's wrong view : "Thus do I understand the doctrine taught by The Blessed One, that on the dissolution of the body a bhikkhu by whom corrupting influences /*āsavā*/ have been exhausted, is destroyed, perishes, and does not exist after death."

Commentary on this statement : "His understanding of the teaching would have been correct if he had thought that all *formations* arise and pass away, so that their is only a continuation or discontinuation of such formative activity. But his statement is false in so far as he thought that a *being* was destroyed and had perished."

In the continuation of the discourse Sāriputto explains to Yamako the proper meaning in the same terms as in Buddho's instruction to Aṅurādho on the same subject /in S.XXII, 86/ :

—Do you regard body as the *tathāgato*/the "thus come", the attribute of a *buddho*, understood in such connections as designating a human being in the widest sense/ ?

—Surely not, venerable sir.

—Do you regard the feeling, the perception, the activities, the consciousness as the *tathāgato* ?

—Surely not, venerable sir.

—Do you regard the *tathāgato* as being in the body/or in feeling, perception, activities, consciousness/ ?

—Surely not, venerable sir.

—Do you regard the *tathāgato* as being *apart* from the body/ feeling, perception, activities, consciousness/ ?

—Surely not, venerable sir.

—Do you regard the *tathāgato* as being *different* from the body /feeling, perception, activities, consciousness/ ?

—Surely not, venerable sir.

—Do you regard the body, the feeling, the perception, the activities and the consciousness–taken together as a whole–as the *tathāgato* ?

—Surely not, venerable sir.

—Do you regard the *tathāgato* as being *without* body, feeling, perception, activities and consciousness ?

—Surely not, venerable sir.

—Then, Yamako, since in this very life a *tathāgato* cannot be identified as existing in truth, in reality, is it proper for you to state that a *tathāgato* is a superman, the most excellent man who has attained the highest aim, and that a *tathāgato*, if he has to be designated, should be designated in other than these four terms: 'The *tathāgato* exists after death'; or 'he does not exist after death'; or 'he both does and does not exist after death'; or 'he neither does nor does not exist after death'" ?

—Surely not, venerable sir.

In the *Anurādha-suttaṁ* Buddho concludes the same dialogue with the statement : " Both formerly and now, it is just suffering that I proclaim and the cesing of suffering."

In another pattern of standardized texts, *uccheda-vādo materialism* is rejected together with its dialectical antithesis called *sassata-vādo* or the "eternalist" belief in indestructible stability of the Absolute Being : " This is the world, This is the Self. Permanent, abiding, eternal and immutable shall I be after death, in eternal identity shall I persist. . a perfectly foolish point of view." /M.22, " The Simile of the Serpent "/.

Due to this dialectical connection with the actual Brahmanic belief in such an Absolute, the Buddhist exegesis has attributed an exagerated importance to the *uccheda-vādo* by selecting it for its scholastic example among many more or less artificially constructed or isolated aspects of the materialistic " world-lore " /*lokāyatam*/

or natural science to which Pali texts refer in patternized formulae /Cf. D.1–2/.

The basic Pāli formulation of the nihilist thesis /*suññа-vādo*/ in the above mentioned texts was further elicited in the *prajñā-pāramitā-sūtras* of the early Sanskṛt *mahāyānaṁ* literature. Its philosophical formulation attained its scholastic accomplishment in Nāgārjuna's *Mādhyamaka-kārikā*.

Modern interpreters of Nāgārjuna's *sūnya-vadaḥ* have often attempted to apply the pattern of Hegel's dialectic more or less directly to Nagarjuna's logical argumentation, or, better to say, to approach it from a Hegelian bias. An apparent analogy of Hegel's idea of the Absolute to the Vedāantic idea of Brahman may have misguided them to this further inadequate analogy of two methods of dialectical logics dealing both with the relation of Being to Nothingness. The ultimate intention in following this false pointer appears to be the re-absrotion /" sublation " in the meaning of Hegel's untranslatable German term *Aufhebung*/ of the primeval /ontological and not epistemological/ nihilism of the Buddhist *śūnya-vādaḥ* into a quasi-Vedāntic absolutism, interpreted as the principle of a wider ontological and cosmological synthesis[24]. The basic differential element neglected at the outset of this reductionist tendency was the specific structure of the dialectical ' triangle ' in the Buddhist formulation, as singled above, where ' nothing ' stands in dialectical opposition to both ' being ' and ' non-being ' /within their *catu-koṭi* extension/.

Th. Stcherbatsky, in *The Conception of Buddhist Nirvāṇa*, was misled to some extent, in his interpretation of Nāgārjuna's *śūnya-vādaḥ*, by the uncritical tendency of the pre-Kantian philosophy and the anti-critical Hegelian reaction to perpetrate the classical error exposed by Kant, whose transcendental criticism revealed the absurdity of the naive ontological hypothesis that all negation of /relative/ ' being ' by ' non-being ' should necessarily imply a /dialectical/ affirmation of The Absolute Being on its back-stage. /In the meantime we have been cautioned again by Nietzsche and still more explicitly by Sartre's criticism, against the eristic origin of such dialectical absolutism in the inborn character of ' bad faith '. The same illusion had been recognized by all Indian philosophies in the basic structure of our karmically conditioned mind as its transcendental limitation by *avidyā* and *mohaḥ*, nescience and delusion./

Candrakīrti, in his commentary /*Prasanna-pādaṁ*/ to the chapter on *nirvāṇaṁ* /XXV, 15/ in Nāgārjuna's *Mādhyamaka-kārikā*[25] states : " The judgment that *nirvāṇaṁ* is not an Ens would be possible if /we knew/ that there is a real Ens, then by its negation /*nirvāṇaṁ* would be determined/. If /we knew/ that there is a real non-Ens, then by its negation we would also understand what /the judgment means/ that *nirvāṇaṁ* is not an Ens." Consequently, the aim of Candrakīrti's argument is to preclude the uncritical inference implying either a ' positive ' or a ' negative ' Absolute. To Stcherbatsky, however, it appears " evident that *transcendental or absolute existence*. . can be nothing but the simultaneous negation of " Ens " and " non-Ens "." Thus the Hegelian idea of synthesis as the absolute ontological and cosmological condition and *limit* of meaningful dialectical thinking has been read in the Buddhist *anti*-ontological intention. In order to justify this reduction to the inadequate consomological conception of Hegel's historically predetermined ontology, Stcherbatsky extends, not only in his interpretation but also in his translation, the vague meaning of the un-Buddhist designation " Absolute " to an indetermined range of terms which in Buddhist Sanskrit were specified by clear connotations in their particular contexts. Thus for instance he speaks of " absolute reality in itself /kaścit svabhavaḥ/, translates *nirvāṇaṁ* as " the Absolute ", interprets both *tathatā* and *dharmatā* as " Absolute "; *Nirupādhi-śeṣe nirvāṇa dhātau* is translated as " the Final Reality of Nirvāṇa ", *nirvṛtti* as " the Absolute ", etc.[26]

Stcherbatsky's indiscriminate use of the term " Absolute " in its implicitly Hegelian meaning, as well as his translation and interpretation of *śūnyatā* as " the principle of relativity" has often been criticised by later authors[27]. Yet in his explicit references to modern interpretations of dialectical antinomies Stcherbatsky refers mainly to Kant. I can agree with most of these specific analogies as long as they do not overstep the limits of the Kantian transcendental dialectic, whose basic framework of the four antinomies of pure reason correspond to the analogous structure elicited by Buddho in the *Brahma-jāla-suttaṁ* /D.1/[28]. The adequacy of Stcherbatsky's insight into the Kantian philosophy was reaffirmed in his later masterpiece, the *Buddhist Logic*, where his interpretation of Dharmakīrti's *Nyīya-bindu* from the standpoint of modern comparative philosophy was influenced also by Sigwart's Logic, a standard textbook of transcendental logic of the Kantian school at the beginning of the twentieth century. Hegel is mentioned only in a few indirect references.

Stcherbatsky's uncritical and mostly implicit analogies with Hegel's absolutistic monism in the interpretation of Nāgārjuna's *śūnya-vādaḥ*, in his earlier work seem to have been influenced primarily by a heterogenous suggestion : a superficial analogy between Hegel's terminology and the monistic, *advaitaḥ*, interpretation of the traditional Vedāntic teaching. This analogy, representing a typical trend of neo-hinduistic thought at the beginning of the twentieth century, influenced most probably also Stcherbatsky's interpretation of Nāgārjuna's philosophy. Speaking of "the interrelations between Buddhism and Vedānta" in his Buddhist Logic[29] he first singled out the fact that "in the first period Buddhist philosophy represents the contradictorily opposed part to the philosophy of the Upanishads. Though in the course of its historical development this " Spirit of a revolt against Monism.. did not survive, it could not destroy Indian Monism which remained unshaken, so deeply was it rooted in its brahmanical strongholds. On the contrary, Monism took the offensive and finally established itself triumphantly in the very heart of a new Buddhism. On the background of these presuppositions Stcherbatsky undertook to explain how the school of Nāgārjuna " received a dialectical foundation ", and how the later schools of Buddhist philosophy became established " as a system of Idealism ".

The relative priority granted to the *advaita vedāntaḥ* by Stcherbatsky reappeared later in T.R.V. Murti's *The Central Philosophy of Buddhism* in an exagerated extension of the emphasis on the Hegelian analogy as a criterion of his comparative interpretation of Nāgārjuna. It had to serve his intention to reduce ultimately " the central philosophy of Buddhism " to a pseudo-Nāgārjunian idea of a Negative Absolute, and thus to reabsorb it into the wider absolutist conception of the Neo-Hinduist school. Murti found his exegetical thesis " unerringly indicated " in the works of his teacher Radhakrishnan, and took it over uncritically as the basic tenet of his apologetic work : " Buddha did not doubt the reality of Nirvāṇa /Absolute/ "[30]. Nāgārjuna's *śūnya-vādaḥ* had consequently to be brought down to this orthodox dogma and thus interpreted away.

A different more sober approach to the problem of inter-relations between Buddhism and the Advaita-Vedānta can be found in the study on Gaudapāda by T. M. P. Mahadevan. This book contains also a justified criticism of some earlier attempts in the 20th century to reduce Buddhism and Advaita-Vedānta to a common denominator and thus to adulterate both. The idea of a " negative absolute " has been critically rejected in later European works on this subject particularly by E. Lamotte.[32]

Hegel's absolute idealism and advaita-vedānta

> This view of things..in contradistinction to the subjective idealism of Kant's critical philosophy may be termed absolute idealism. Absolute idealism..is by no means merely restricted to philosophy. The truth which it expresses lies at the root of all religion.[33]

A comparative analysis of the basic tenets of Hegel's absolute idealism from the standpoint of advaita-veādanta can easily sort out three kinds of relevant statements :

/1/ Statements which at the first glance seem to confirm the analogy of these two absolutist and idealist standpoints.

/2/ Statements not less convincing in the initial affirmation of analogous tenets which then immediately are overturned into a dialectical negation of the quasi-vedāntic doctrine.

/3/ Statements which at the first glance exclude any possibility of comparison between the two absolutist approaches to the problems under discussion.

In the first category the statement quoted in the motto seems to encompass the widest range of philosophical interest in its universal finality. As a touch-stone for the universal validity of this abstract principle we can use a simple statement of historical fact/such as Hegel's philosophy of history with all its dialectical ambiguity could not produce/ in the formulation of the Indian standpoint in T. M. P. Mahadevan's presentation of " The Religio-Philosophic Culture of India "[34] :

> It has puzzled many a western student of Indian thought how and why there has been maintained in India a close alliance between religion and philosophy. Generally speaking, the preacher and the philosopher alike in the West deplore this alliance for quite opposite reasons..That the western preacher and philosopher hold Indian culture to be defective for diametrically opposite reasons is an inconscious compliment to that culture.

Hegel can be considered as an exception here in so far as he *thinks* that there should be what the Indian, on his side, states *to be a fact*.

Though under an un-vedāntic heading of " absolute notion " which is " bare and simple infinity " Hegel describes " the ultimate nature of life, the soul of the world, the universal life-blood ", as being " itself every distinction that arises, as well as that into which all distinctions are dissolved, pulsating within itself, but ever motionless, shaken to its depths, but still at rest "—just as in the famous verses of Īśa upaniṣad.

The suggestion of an analogy to Uddālaka Aruṇi's *tat tvam asi* is expressed in more concrete terms in Hegel's visualizing " the free unity with others in such wise that just as this unity exists through me, so it exists through the others too—I see them as myself, myself as them ";—or in the statement that " the thing simply ' found ' enters consciousness as the self-existence of the ego—ego, which now knows itself in the objective reality, and knows itself there as *the self*". Hence the conclusion that " the process we have is rather this, that a distinction is certainly made, but because it is no distinction, it is again suspended "[35].

In another context the Buddhist theory of *anātmā* seems to be explained away in typically vedāntic terms : " Consciousness of life, of its existence and action, is merely pain and sorrow over this existence and activity; for therein consciousness finds only consciousness of its opposite as its essence—and of its own nothingness. Elevating itself beyond this, it passes to the unchangeable."[36]

Going over to *the second category* of statements the reader should be aware of the structural premise of Hegel's closed system where all philosophical theses stated on one point of the historical development of his "Absolute Spirit" are necessarily superseded and denied, also in their total ethico-religious value, in the very next moment of this linear process of evolution, so utterly non-Indian, and not less absurd to many European philosophers, since Kierkegaard's and Schopenhauer's first revolts against Hegel's abolishment of all criticism both in metaphysics and in ethics.

It is exactly for this pseudo-rational preconception that Hegel fritters away the vedāntic idea of *ānandaḥ* by an astonishing turning of the torture-wheel of his dialectical proces of history, in letting even the penultimate "moment of enlightenment" be "superseded" by the next and best attainment of his own Christian "Revealed Religion":

"In the completed act consciousness realizes itself as a given individual consciousness, or sees existence returned into itself and in this consists the nature of enjoyment."

Yet, the proposition "The Self is Absolute Being" gives expression to a "light-hearted folly" alone. From the ultimate standpoint of Hegel's Christian "Revealed Regligion" this proposition, 'The Self is Absolute Being', belongs, as is evident on the face of it, to the non-religious, the concrete actual spirit". What should be "evident on the face of it" is Hegel's patriotic belief that "in ethical life the self is absorbed in the spirit of its nation".[37]

I do not consider it proper for a Buddhist bhikku to discuss any further the authenticity of such unexpected exegesis of the Christian doctrine. Many protestant theologians, still in the 20th century, have accepted it.

A simpler condensed example of statements characteristic for our second category is the following:

> Away remote from the changing vanishing present lies the permanent beyond: an immanent inherent Self-Being /*ein Ansich*/, which is *the first and therefore imperfect manifestation of Reason*....It is empty, for it is merely the nothingness of appearance and positively *the naked universal*...The supersensible is then *appearance qua appearance*.[38]

This dialectical turning implies also the essential reason for which the continuation of a comparative analysis of Hegel's Absolute, on the one hand, and the vedantic Brahma, which is Paramātmā, on the other, cannot reach any deeper below the illusory appearance of the suggestive surface-effects pointed out in our first two categories. This essential reason has to be sought in Hegel's rationalist conception of the Absolute as pure Reason.

Thus, *in the third category*, we can investigate only the reason of "sublation" /*Aufhebung*/ of the *tertium comparationis* of the presumed analogy.

It has been observed that Hegel's Absolute is merely "the whole of finitude" of he "logical idea", and as such "a result" or product of thought. In this sense only "the truth is the whole. The whole, however, is merely the essential nautre reaching its completeness through the process of its own development. Of the Absolute it must be said that it is essentially a *result*."[39]

Prof. Mahadevan, in analysing the difference of the "upaniṣadic acosmism" /*niṣprapanca*/ from European conceptions of pantheism and idealism, or "idealistic pantheism" /though not going back to Hegel, but quoting his less authentic English epigones/, points out the unquestionable essential contradistinction of the vedāntic standpoint from / Bradley's/ Hegelian idea of the Absolute :

> The non-dual and distinctionless Brahman is not a synthesis of differences or a whole of parts; it is not an identity in-difference. It is not to be identified with physchical existence either.[40]

From the same standpoint the difference from the pantheistic equation of the Absolute /God/ with the world is explicated on the example of the *Puruṣa-sūktam* /Ṛ.V., X, 90/ :

> Brahman is not equated with the universe, though the universe has Brahman for its sole cause..Being immanent in the universe, Brahman is also transcendent. *The Puruṣa-sūkta*..declares that all beings are only a fourth of the supreme Spirit, while the three other fourths remain immortal in heaven.[41]

Though the characteristics of acosmism in upaniṣadic contexts, as singled out by Prof. Mahadevan, could be interpreted also as trans-cosmism /in order to distinguish it from the absolute a-cosmism of the Buddhist *śūnya-vādaḥ*/-the whole problem certainly cannot be interpreted, on the Indian side, in terms of Hegelian dogmatic rationalism. Though all-comprising, the Hegelian

Absolute remains *immanent*, or better to say imprisoned, in the totrure-chamber of his historical world-process. There, brought " out of the flux of the actual world " /of appearance or *māyā*/, the being of Hegel's " changeless eternal spitits lies in thinking the unity which they constitute ". Reason as " Spirit " /cf. Puruṣaḥ/ " is consciously aware of itself as its own world, and of the world as itself ". Thus Hegel's Absolute is reduced to an " absolute notion " of his dogmatic Reason. " The Absolute Idea ", whose self-sufficient unity is " the absolute and all truth ", is the " Logical Idea ".[42]

Concerning *avidyā*, or metaphysical nescience as the ultimate root of human quest of truth, we find in Hegel's Logic[43] another apparent analogy, obviously of no deeper consequence for the determination of his " absolute notion " of the world process :

> The true knowledge of God begins when we know that things, as they immediately are, have no truth.

Regardless of such dogmatic statements, it was Paul Deussen who, at the beginning of the 20th century, tried to draw the attention of his contemporary Indian philosophers to a much deeper and essentially more adequate basis for comparative studies on this critical point. It is the point of the *primordial transcendental turning* of Indian thought, which in European philosophy was reached only with Kant's " Copernican turning" to the question of transcendental structure of the cognizing mind, question originating in the discovery of the principle of all metaphysics. This root-principle cannot be found in the nature of the proto-substance /*arché*/ of the material world where the Ionian " firstd philosohers" looked for it, but only in the nature of *avidyā* as formulated in *Īśa* and *Kena upaniṣads* :

> Into a blind darkness enter those who follow nescience and into a still greater darkness those who delight in science.

Here the term " science " is most suggestive of its modern " positive " meaning. Wisdom, which already the old Greeks distinguished from mere " views " and theories /*doxu*, *dṛṣṭi*/. begins with the critical question :

> By whom directed does the mind attain its mark ?

What is

> the ear of the ear, the mind of the mind, and the speach of the speach, the breath of the breath, the eye of the eye ?

In marking out this meaning of Kant's Copernican turning, Deussen considered it at the same time as the first proper and adequate basis for comparative studies of Indian philosophies, and of *advaita-vedāntaḥ* in the first place, in the light of modern European philosophy.

Though the only part of Deussen's General History of Philosophy[44] translated in English was the volume dealing with the philosophy of the upaniṣads, it has been widely recognized by Indian philosophers, and even considered by some as authoritative.[45] Yet the neo-Kantian trend of the European philosophy remained overshadoved in England by a neo-Hegelian trend, which since the middle of the 19th century was developing in a strange ignorance of Kant's criticism, though on the " Continent " Kant's Critique has been generally recognized /even by Hegel/ as the " Prolegomena to any future Metaphysic ", and as such also as a precondition for the understanding of Hegel's anti-criticist reaction. The first competent translator of Kant in England, F.M.D. Meiklejohn, considers that " Kant's fate in this country has been a very hard one. Misunderstood by the ablest philosophers of the time, illustrated, explained, or translated by the most incompetent—it has been his lot to be either unappreciated, misapprehended, or entirely neglected."[46] Since the time when this statement was made, the situation can be considered only as further deteriorated. The loss of Kant for India, due to the colonial dependence in cultural relations /felt still in our generation/, may be considered inestimabe in the present situation.

It may have been just Hegel's stronger accent on an apparent rationality that attracted Indian philosopher, at the beginning of the 20th century, to his dogmatically closed system.

I do not feel competent to judge on Hegel's more or less implicit influence on modern Indian philosophers. One outstanding reference seems, however, to be significant for the historical situation under review :

K. C. Bhattacharyya

During the first half of the 20th century the import of K. C. Bhattacharyya to modern Indian philosophy has been recognized as the most ingenious and original in his generation. For a student of Hegel's philosophy it would be harldy possible to doubt of Hegel's influence on the formulation of Bhattacharyya's basic thesis on *The Subject as Freedom* /1930/, considered in Indian philosophy as his "masterpiece of analytic thought, metaphysical insight and speculative originality".[47] Yet, what from our comparative standpoint seems more significant for the originality of his conception, is a peculiar Indian motive at the outset of the trend of thought which determined his later critical attitude to Hegel. It was *The Jaina Theory of Anekānta* /1925/. Already his investigation of *Some Aspects of Negation* /1914/ have brought him in the orbit of Hegel's logic and to a critical attitude to the dialectical theory of the negation of the negation which will bring him beyond the Hegelian pattern of dialectics. Ultimately his critical approach to European philosophy predominantly in its neo-Hegelian aspects /I could not consult his *Studies in Kant*, probably of a later date and of a lesser, post-Hegelian import/ determined the way of his return to a stricter vedāntic absolutism in his *Concept of Philosophy* /1936/. Considered as a critical revision of the dogmatic shortcomings of Hegel's dialectics, Bhattacheryya's *Concept of the Absolute in its alternative forms* /1934/ in its ultimate phase seems to be most valuable for a comparison with contemporary and later European critique of Hegel's dialectical criteria /e.g. Jaspers, Tillich/. Considering the development of K. C. Bhattacharyya's thought, as I have tried to trace it here in its broad lines, as a whole, it is my impression that his progress from the initial position of *anekānta-vādaḥ* to a neo-vedāntic absolutism was essentially and positively influenced by the implicit development of his critical attitude to Hegel.

Here are a few pointers which appear significant for this whole proces of /ideally conceived/ development and its results :

The noetic aspect of the subject as freedom in the constitution of "the object of consciousness undergoing a transformation..by the act of reflection and meditation" is described by Hegel, in the "Preliminary Notion" of his Logic[48], as follows :

> The real nature of the object is brought to life in reflection but it is no less true that this exertion of thought is *my* act.. *our Freedom is thus the source of this real nature*..Freedom is obviously and intimately associated with thought.

In *The Jaina Theory of Anekānta*[49] Bhattacharyya investigates the relation of knowing and its content, the knowing or assertive function which is sometimes identified with the function of meaning..and is intelligible only by the concept of *freedom that can neither be said to be nor not to be.* This freedom, stripped of its subjective associations, is but the category of indetermination.

In *The Subject as Freedom* Bhattacharyya proposes to elicit the "subjective function" of the same noetic structure "after Vedānta as conscious freedom or felt detachment from the object". "The subjectively knowable 'I'" is described as having "a feeling of relating itself to the object..This felt relating is the positive freedom of the subject having different felt modes like knowing, feeling"—and other functions corresponding /implicitly/ to the Cartesian *Cogito* as elicited specifically in the phenomenological analysis of Husserl's Cartesian Meditations. All these "subjective functions" in Bhattacharyya's analysis "represent the modes of freedom"[50].

In a later context, *The Concept of Philosophy*[51] :

> The Hegelian absolute may be taken to represent the indetermination, miscalled *identity*, of truth and freedom which is value.

On this point not only the agreement on the *noetic value of freedom* is singled out, but also the explicit difference of the structure of transcendental logics based on this concept.

On his way towards a neo-vedāntic formulation of the idea of the Absolute, Bhattacharyya observed also that Hegel's metalogical concept of this entity was "intrinsically irreligious"[52].

From the same standpoint it was essential first of all to avoid the dogmatic tendency of pseudo-rationality in Hegel's dialectical logic. As summarized by D. M. Datta[53] :

> The recognition of the indefinite would cure logic of the dogmatic tendency to treat the definite, the rational, the knowable as the sole content of thought, and would change its general outlook.

The "category of indetermination" by which Bhattacharyya's understanding of "the subject as freedom" is informed, and his criticism of the Hegelian idea of " pure being " can be summarized in the following terms :

> Hegel's conception of the indeterminate, the pure being, is another possible approach to the indefinite. The pure being is emptied of all determinate qualities by Hegel; but he still conceives it as a positive object of thought; and to this extent being is not yet fully indeterminate. . In fact the opposition between the two dfinite contents of thought, being and non-being, cannot be understood at all without something which is neither and can yet make their relation possible. . Recognition of the indefinite corrects this dogmatic bias of each, and yet gives to each a new light and reformed character. As against the dialectical principle that regards reason as the sole reality, " it indicates an alternative—*unreason*—beyond reason ", and suggests that position and negation, being and non-being, need not necessarily be conceived as the moments of the *positive absolute*, but rather of the Indefinite which is beyond both.

It is not possible in the present sketch to enter in a comparative analysis of differences determining the structure of Bhattacharyya's transcendental logic. What is essential for the suggested approach to contemporary European criticism of Hegel's closed system in this field can be pointed out in some implications of Bhattacharyya's basic principle[54] :

> Every system of philosophical thought or religion has its own logic and is bound up with one or other of the fundamental views of negation.

The advantage of this logic of the indefinite is that it " finds categories for widely different metaphysical notions of reality " which are not reducible to common denominators.[55] Husserl's " categorial regions " had the same initial aim.

Yet Bhattacharyya's typological attempts to classify philosophies in four different types corresponding to types of theoretic consciousness /which " may be roughly called empirical thought, pure objective thought, spiritual thought and transcendental thought "[56]/, and his distinction of a " triple absolute " which " is apparently the prototype of the three subjective functions, knowing, willing and feeling "[57], may remind us rather of N. Harmann's further developed classifications of spheres and levels of real and ideal being, where, e.g., the four levels of real being are : matter, life, consciousness and spirit, while the spirit, on its own level of being, comprises a triple aspect of personal, objective and objectified spirit.

Bhattacharyya's thesis : " All philosophy is systematic symbolism and symbolism necessarily admits of alternatives "[58], may remind us first of all of E. Cassirer's extensive *Philosophy of Symbolic Forms*. The speculative tendency in applying symbolism as a method of philosophical investigation could perhaps, in some of its aspects be compared with " cypher reading " suggested by Jaspers as a method of existential ontology.

For the critique of Hegel's tendency to drift the whole historical process of world-cultures in one single direction, and to sacrifice each dialectically overtaken and outwitted " moment " to an unrevertibly devaluated past, it is significant that Bhattacharyya, in *The Concept of Philosophy*[59], ultimately concentrates his attention on the field of religious experience which " by its self-deepening gets opposed to or synthetised with other experiences. One experience may enjoy another as a stage outgrown or as in absolute conflict with it, where a third experience may emerge as adjusting them to one another ". And yet :

> There is no possibility of systematising them by secular reason, and so far as they systematise themselves, they present themselves in many alternative systems. . Extensive internally coherent *systems with indefinite boundaries* are actually revealed, though this is no *a priori* necessity of a system, and still less of a system admitting no alternative system. . The theoretic form of a religious system is a philosophy of religion, there being as many forms of this philosophy as there are religious systems.

It was the same religious motive, and in a specifically Indian context, which brought Paul Tillich to the following anti-Hegelian explication of his " dynamic typology ".[60] Like Bhattacharyya, Tillich considers the dialectical structure of interdependently constituted events to be essential for the dynamics of cultural life. In his typological investigations he describes the dialectical tension as a process of polarisation within one structural unit. Such tension provokes conflicts, but it also breaks open a way out of the contradiction towards a possible unity of polarised elements. In this way their static stiffness gets loosed, so that individual things and persons may transcend the type to which they pertain, *without being bereft of their character*. Tillich exemplifies this advantage of his dynamic typology over the dialectic of the Hegelian school " whose movement is restricted to one direction only, so that it relegates to the past whatever has been dialectically superseded ", with reference to his dialogues with Buddhists in Janpan on the following presupposition :

The Hegelian dialectic /e.g. in K. Barth's " theology of the crisis "/ considers Buddhism as an early stage of religious development which has already been totally overcome by history. Buddhism still exists, but the "world-spirit" is not any longer creative in it.

Dynamical Typology, on the contrary, describes Buddhism as a living religion in which specific polar elements are dominant, so that it stands in polar tension to religions dominated by different elements. According to this method, says Tillich, it is not possible "to contemplate Christianity as the absolute religion, as Hegel did".

Karl Jaspers in his discussion of the religious crisis of our post-war civilization[61] formulated the ideal of a perennial philosophy as " three thousand years of history of philosophy comprehended in a unique actuality ". The philosophical thought in manifold aspects of its creation conceals one truth. In modern philosophy Hegel made the first attempt to understand the unity of this thought. Still, in his proceeding, all that was earlier is placed as partial truth on a lower grade of the ascent to Hegel's own philosophy. According to Jaspers, the central theme of our actual philosophical endevour should be understood as " the elucidation of communication from its multiple sources in the modes of the Comprehensive ".[62] In a ceaseless renewal of this communication the outstanding attainments of the past should not be considered as superseded but as actually present. Only when all philosophy is thus present, its sources will be revealed, too, as " being now ". In its temporal transitoriness the essential truth of the " at each time time-annulling *philosophia perennis* " will be simultaneously present. In another formulation[63] :

> Philosophy does not leave the area of the Comprehensive, does not forget the process of transcending that is inseparable from it, remains open to the being that cuts across time, the being that thought apprehends as the actual presence of eternity in historicity.

Conclusion

In comparing K. C. Bhattacharyya's thesis on "alternative systems with indefinite boundaries", in its oppsition against the absolutism of Hegel's "system admitting no alternative system", with the later, still more explicit, endevours of Jaspers and Tillich in the same direction, and characteristically arising also on the ground of the philosophy of religion,—from the standpoint of comparative philosophy we are confronted with the same tendency to break the narrow frame of Hegel's dialectical absolutism.

Since more than hundred years Hegel's anti-criticist /i.e. anti-Kantian/ dogmatic Reason has served, far beyond the academic ground of its origin, as a successful *ideological* tool for imposing a *europo-centric attitude* supported by the authority of political and social forces involved in a dialectical tension with ruinous effects for the dignity and the very existence of all extent world-cultures.

If the Hegelian "theology of crisis" has to be supplanted by a comprehensive comparative philosophy, as visualized in statements quoted above, then first of all *the Hegelian dialectical structure should be eliminated as a method of comparative philosophy.*

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Bhikkhu Ñāṇajīvako

NOTES

1. *Phenomenology of Mind, Preface.* Transal. J. B. Baillie, London, Allen and Unwin, 2nd ed., 1949, p. 68 / *Phen.* in the following notes.

2. Ibid.,–Cf. my essay on the need of the category of Karma in modern European philosophy, *Karma-the Ripening Fruit,* in *Main Currents in Modern Thought*, Vol. 29, No. 1, 1972.

3. *On Yoga*, Vol. I, Pondicherry, 1957, p. 13 f.

4. E. Zeller, *Die Philosophie der Griechen*, Introd. by F. Lorzinger and W. Nestle to the 6th edit., 1919.

5. *Das Christentum und die Begenung der Weltreligionen* / German transl. of *Christianity and the encounter of the world religions*, / Stuttgart 1964, p. 36.

6. Cf. F. Nietzsche, *The Will to Power*, First Book/" European Nihilism", section 55 and 64 : "This is the European form of Buddhism, that *active negation*, after all existence has lost its meaning." "*The second appearance of Buddhism*.–Its precursory signs : the increase of pity..The fact that it is impossible for religion to carry on its work any longer with dogma and fables.."

7. *Vorlesungen ueber die Geschichte der Philosophie*, in *Werke*, Berlin 1840, Vol. XIII, pp. 112 and 164.

8. *Die orientalische welt*, in *Vorlesungen ueber die Philosophie der Weltgeschichte*, Vol. II. Edit. G. Lassen, Philosophieche Bibliothek 171 b, Leipzig 1923.

9. *Rezension der Schrift 'Ueber die unter dem Namen Bhagawad-Gītā bekannte Episode des Mahābhārata' von wilhelm von Humboldt.*

10. "The artificer/Egyption religion / " is the third and highest stage of "Natural Religion" in Hegel's classification. It is preceded by "Plants and animals as objects of religion" in the "Primary religions of India". "The parsee religion", under the heading "God as light" is dealt with on a still lower level.

11. *Phen.*, p. 720.

12. Id., p. 648.

13. Cf. "Religion in the form of Art / Greek religion / ", where "spirit is a free nation, in which custom and order constitute the common substance of all"/p. 709/

14. Id., p. 649/Names in brackets are my addition./

15. Id., p. 652.

16. *The Philosophy of George Santayna*, Edited by F. A. Schilpp, chicago 1914 p. 571.

17. *The Logic of Hegel* translated from the Encyclopaedia of the philosophical sciences with prolegomena by W. Wallace, Oxford, Clarendon 1874. L. in the following notes./–pp. 134,135, 169.–*Phen.*, p. 502.

18. P. 802.

19. L., section 151, p. 236.–Cf. P. Tillich's criticism of Karl Barth' "theology of the crisis", op. cit. p. 31.

20. Cf. the concluding chapter of *Phen.* on "Absolute Knowledge" p. 789 ff.

21. The remaining two are *dukkhaṁ*, suffering, arising from the realization of impermanence, and *anattā*, the negation of the Self-principle or a permanent soul. See on this subject my article *Aniccaṁ-The Buddhist Theory of Impermanence*, in *The Basic Facts of Existence I*, The Wheel Publication No. 186/187, Kandy, Buddhist Publication Society. 1973.

22. Under this designation levels of noematically reduced consciousness are described in the scheme of *arūpa-jnānaṁ* in Pāli texts. The correspondence of the third and fourth *arūpaṁ* level with the notion of *śūnnatā* is phenomenologically described in Buddha's discourse *Cūḷa-sunnata-suttaṁ*, M. 121. This aspect of the Buddhist theory of nothingness is explained in my forthcoming essays on *jhānaṁ*, structures of Buddhist contemplation.

23. The collections of Pāli text in the present paper are abridged as follows : S. = Saṁyutta-nikāya, M. = *Majjhima-nikāya*, D. = *Dīgha-nikāya*. Serial numbers refer to the titles of the *suttas*.

24. For the acosmic aspect of Buddha's attitude to the world see my article "Why is Buddhism a Religion?" in *Indian Philosophical Annual*, Vol. VI, Madras 1970. For the antiontological aspect see my article on *Aniccaṁ*, quoted in n. 21 above.

25. In Stcherbatsky's translation, op. cit., p. 201.

26. Op. cit,, pp. 207, 205 n., 33, 133, 188 n.

27. Cf. op. cit., p. 90.–For recent criticism see also the Introductory Essay to Kenneth K. Inada *Nāgārjuna—A Translation of his Mūlamādhyamakakārikā*, Tokyo, The Hokuseido Press, 1970.

28. Cf. my paper, C. Veljacic, *Dependence of Punar-bhava on Karma in Buddhist Philosophy* in *Indian Philosophical Annual*, Vol. I (1965).

29. Vol. I, p. 21 f.–Ed. Dover Publications, New York 1962.

30. T. R. V. Murti, *The Central Philosophy of Buddhism*. 2nd ed., London, Allen and Unwin, 1960. p. 48.

31. T. M. P. Mahadevan *Gauḍaāda, A Study in Early Advaita*, 3rd ed. University of Madras, 1960.

32. See, also for further references, his book, *Le Traité de la Grande Vertu de la Sagesse de Nāgārjuna*, Tome III, p. 1227. Institut Orientaliste de Louvain, 1970./– Cf. also H. V. Guenther, *Buddhist Philosophy in Theory and Practice*, Penguin Books 1972, where the authentic Buddhist standpoint is stated in a footnote p. 224 : "The rejection of the translation of the Tibetan term *stongpa-nyid śūnyatā* by 'emptiness' or 'void' is based on the following consideration : *Śūnyatā* is not a container that can be emptied nor is there anything that could be taken out of *Śūnyatā*. The choice of the term 'emptiness' dates back to the time when under the influence of idealism mind was conceived as a container of ideas, and when the ideal seemed to be to leave an empty blankness!'

33. L., p. 79.

34. In *The Cultural Heritage of India*, Vol. I, p. 164. Calcutta 1958.

35. Phen., p. 208, 378, 202.

36. Phen., p. 252.

37. Phen. 630, 750f.

38. Phen., p. 191, 193.

39. Phen., p. 37, 81.

40. Op. cit., p. 175.

41. Id., p. 172.

42. Phen., pp. 555. 457, 208,- L. 323.

43. L., p. 181.

44. *Allgemeine Geschichte der Philosophie*, in 6 vols., 1894-1917. *The Philosophy of the Upaniṣads* / 2nd vol. of the Gen. Hist./ Engl. transl. Edinburgh Clark, 1919. Deussen's basic comparative thesis : *Vedānta, Plato*·

Kant / Vienna 1917, was expounded earlier in his lecture, *On the Philosophy of the vedānta in its relations to Occidental Metaphysics*, delivered at the Royal Asiatic Society in Bombay, in 1893.

45. Cf. the chapter on the upaniṣads in M. Hiriyanna, *Outlines of Indian Philosophy*.

46. *Kant, Critique of Pure Reason*, Translator's Preface/(1856). Already 25 years earlier, Schopenhauer / among whose most faithful followers was Paul Deussen/had the intention to translate Kant into English. Looking for a prospective publisher, Schopenhauer, in a letter to Thomas Campbell in 1831, pointed out among other reasons that Kant's philosophy' "throws a light upon some tenets of the Hindoo and Buddhaistic faith now generally known in England ".

47. D. M. Datta, *The Chief Currents of Contemporary Philosophy*, The University of Calcutta, 1961. P. 129.

48. L., p. 37, section 23/d/. Underlinings are in part mine.

49. *Studies in Philosophy*. First vol. Calcutta, Progressive Publishers, 1956. P. 340.

50. Cf. *The Subject as Freedom*, Amalner/Bombay 1930, Preface, pp. 27, 25, 30.–E. Husserl, *Cartesian Meditations*, transl. by D. Cairns, M Nijhoff, The Hague, 1970. First Meditation, p. 21/60/; Second Meditation, p. 36 f./74 f/; § 8 and 15.–K. K. Bagchi, *The Philosophy of K. C. Bhattacharyya in the Light of Edmund Husserl's Phenomenology* / II./. Reprint from *Philosophical Quarterly*, Amalner 1964.

51. *Contemporary Indian Philosophy*, London, Allen-Unwin, 1952., p. 124.

52. Ibid., p. 122.

53. This and the following quotations are from *Contemporary Philosophy*, pp. 119–121.

54. *Some Aspects of Negation* / Cf. Datta, op. cit, p. 122/.

55. *Place of the Indefinite in Logic*, op. cit., p. 121.

56. *The Concept of Philosophy*, op. cit., p. 107.

57. Id. 124.

58. Id. 123.

59. Id. 122.

60. *Das Christentum und die Begegnung der Weltreligionen*, Stuttgart, Evangelisches Verlagswerk, 1964, p. 36. / German transl. of *Christianity and the encounter of the world religions*, New York, Columbia Univ. Press, 1962. Retranslated by N. /

61. *Der philosophische Glaube*, München, Piper, 1951. The following is my free translation of two passages on pp. 130–131, with two additions quoted from the English transl., *The Perennial Scope of Philosophy*, London 1950, as stated below.

62. *The Perenial Scope of Philosophy*, p. 175.

63. Ibid., p. 143.

A NOTE ON THE MEANINGS OF 'FORM'*

Where to draw the line is always a ticklish question; whether to draw a line at all is even more so. One such pair of questions that is currently facing philosophers (ever since they got interested in looking for the linguistic foundations of their enterprise) and more recently, linguists (ever since they got interested in looking for the philosophical foundations of their job) is the pair that concerns the analysis of the meaning or meanings of a word/term and of a sentence/statement. The philosopher's worry is lest his activity degenerate into the giving of "tedious and inaccurate supplements to [H. W. Fowler's] *Modern English Usage*, instead of philosophical discussion of a 'way of using a word' which could be found in many languages" (Geach 1957 : p. 16). The linguist is equally anxious that his concern for the analysis of meaning does not degenerate into amateurish philosophizing. It is far from the intention of this note to offer (or even suggest) answers to the pair of questions that one could ask about this particular boundary line. It has set itself a much more modest job to set the philosopher right about his notion of what a linguist (a lexicographer, to be more specific) is expected by his fellow professionals (and I mean professionals and not amateurs) to accomplish in writing a dictionary entry or rather in writing the right half of a dictionary entry. It is always helpful to know just how green the grass on the other side is.

In writing the right half of a dictionary entry the lexicographer could be doing one or more of several things : he could be offering illustrative examples, he could frame stage directions for or descriptions of the use of the term, he could list some equivalent expressions that can readily be substituted, and, finally, he could formulate a definition that reports on the existing interpretation. These four alternatives, namely, examples, usage notes, ready equivalents, and reportive definitions can be regarded both as mutually complementary and as muturally substitutive. Thus while *Webster's Seventh New Collegiate Dictionary* (1969) says about the word "*yes .... adv*" that it is

> " used as a function word to express assent or agreement < are you ready ? *Yes*, I am > "

(i.e. usage note followed by an example) and—

> " used as a function word to indicate uncertainty or polite interest or attentiveness "

(usage note) among other things. *The Concise Oxford Dictionary of Current English* (5th edition, 1964) has the following to say about " *yes* particle equivalent to affirmative sentence "—

> " The answer to your question is affirmative, it is as you say or as I have said, your request or command will be complied with, the statement made or course intended is correct or satisfactory "

(reportive definitions as also some ready equivalents) and—

> " (in answer to summons or address) I am here, I hear or am attending to you, (*yes* ? What more have you to say ?) "

(*usage* note, ready equivalent, and example) among other things.

Out of these four there is no danger that the giving of examples or ready equivalents will ever be confused with any kind of philosophical activity. The questions about the drawing of boundary lines (whether, where) arise only in the case of reportive definitions and usage notes, and not with the other two.

Where does a competently formulated reportive definition in a dictionary end and a piece of conceptual analysis begin ? And where does a competently framed usage note in a dictionary end and a piece of usage analysis, i.e. analysis of the conditions for the felicitous use of an expression begin ? In this note we shall confine our attention to the former pair. (Reportive definitions by linguists need not be illustrated from actual dictionaries, they could also be drawn from pieces of meaning analysis carried out by linguists.) Here is a sample of linguists' efforts :

(i) *walk* ..v.. (Of men) progress by advancing each foot alternately never having both off ground at once .. (of animals) go with slowest gait corresponding to human walk .. (from *The Concise Oxford Dictionary*).

(ii) *run* ..v.. (Of men) progress by advancing each foot alternately never having both on ground at once .. (of animals) go at quicker than walking pace, amble, trot, canter, gallop, etc. (from the same source; amble, trot, etc. are *not* ready equivalents, but species of running).

(iii) *cousin* one's consanguineal of the higher-than-first degree of collaterality (source : recent discussions in anthropological linguistics[1])

While none of these terms are of the kind that is of philosophical interest, their definitions are certainly analytical in character. Comparing the definitions of *walk* and *run*, for example, one can easily separate the common genus and the differentiating characteristics. Here are some verbs that are likely to be of philosophical interest (Fillmore 1969) :

(iv) *accuse* say as a judge to the addressee that someone is responsible for something presupposed to be bad :
A (the judge) accuses B (the one accused) of X (something bad)

(v) *credit* think as a judge that someone is responsible for something presupposed to be good :
A (the judge) credited B (the one credited) with X (something good).

In the same vein one can define *excuse*, *exonerate* and *forgive* so as to distinguish between them. It is true that the author of the definitions cited is a linguist who acknowledges his debt to the philosopher Austin.

The reason for assembling this sample is to suggest that the difference between the lexicographer's reportive definitions and the philosopher's conceptual analysis may not lie in that the linguist and the philosopher are performing analyses different in kind or in that the two are analysing entities of different kinds. Rather the two have different ends in view—the linguist is intent on bringing out what is characteristic of a given language, the philosopher is interested in what is common to a large number of languages if not to all of them regardless of their difference from one another.

Let us now turn our attention to the noun *form* in English. In so doing we shall ignore what is likely to turn out to be parochial in one way or the other. The sense of *form* ' class of school pupils in the same year ' is confined to British secondary schools (especially grammar and public schools) and some American private schools. The sense ' body of printed matter secured for printing in one impression ' is confined to the printer's trade.

The sense 'resting place of a hare' is not likely to be matched in other European languages. Even after these and other exclusions, the noun is still left with many senses. I propose to arrange and define these senses. The arrangement has no claim to being historical, though sense 1 is probably the oldest. The definitions will bring out the significance of the arrangement—there seems to be some kind of progression from one sense to the next. In most of these senses the noun *form* is traditionally opposed to some other noun—thus, the pairs *form—matter* and *form—spirit* point to quite different senses. We shall not say anything at this stage about the philosopher's uses of the noun *form*.

(1) Visible, distant aspect such as shape, size, arrangement of parts, colour, light-and-shade, surface texture *as opposed to* body, tactile, proximate aspect such as weight, feel, inner texture.

Examples : He has a well-proportioned face and form. The demon took the form of a tiger. It is without shape or form.

(2) Visible linear aspect such as shape, size, arrangement of parts *as opposed to* the rest of the visible aspect such as colour, light-and-shade, surface texture.

Examples : I saw a dark form moving in the mist. Can you see the form of an elephant in those clouds ?

(3) Shape and arrangement of parts, formal cause (pattern, structure, design, scheme) underlying a concrete object, especially a made object, or a concrete piece of activity *as opposed to* material, substance, matter, that which is shaped and arranged, material cause.

Examples : Gold was imported in the form of bars, chips, and ornaments. Both the arguments have the same logical form, though at the material level one is about the mortality of Socrates and the other is about lying Cretans. A letter of introduction was written in due form. Ancient forms are observed at the coronation. The same subject-matter can be offered in different forms. I brought some blank entry forms (American : I brought some entry blanks).

(4) Palpable effect of a formal cause,actual manifestation with its shape, arrangement of parts, even material *as opposed to* the underlying final cause (function, purpose, intent, content, meaning) and/or efficient cause (spirit, energy).

Examples : Ice and steam are both forms of water. The indefinite article in French has three forms : *le, la, les.* In synonymy different forms have the same meaning. Don't do it for form's sake : you must mean it. Tax evasion is a form of dishonesty. Democracy is a form of government; parliamentary democracy is a form of democracy. Forms of worship. Asking you to stay for dinner is common form among them; don't take such an invitation too seriously. This is a subtle form of insult. Revenge has taken this strange form.

In all the four senses of *form* presented so far form is opposed to something else that is known less readily, that is less immediately accessible. In the fourth sense the less accessible is also the more abstract. Also there are certain relationships. The second sense can be seen as the first sense specialized in one direction. The third sense can be seen as the second sense generalized beyond the visual domain.

(5) That which yields or informs the formal and material effect, the ability to perform, essence, spirit, idea, life *as opposed to* matter, body, the actual manifestation.

Examples : The horse/athlete is in form/is out of form/ has lost his form. He was in great form—the very life of the party. His speech was in the form of a bitter attack. (Cf. His attack was in the form a bitter speech: with *form*–4.)

The movements from the third sense to the fourth and from the fourth to the fifth can be set out as follows :

more concrete less Abstrabt	effect, manifestation		4	5′
⋮	material cause	3′	⋮	⋮
⋮	formal cause	3	⋮	⋮
less concrete more abstract	efficient and/or final cause		4′	5

Note : 3, 4, 5 stand for senses 3, 4, 5 and 3′ 4′ 5′ for the respective opposite terms—material, function/spitit, and matter.

This is a typical example of polysemy of the kind that does *not* involve openness of concept or essential contestation. While particular pairs, say, sense 1 and sense 2, are likely to turn up in the same word or phrase in other languages, there is something parochial about the whole set of five senses. What about each of the opposed pairs of senses, say, 1 and 1′, 3 and 3′ ? They are less parochial and so likely to found in a large variety of languages. Note that the English noun *shape* has senses similar to 2 (dim shapes in the mist), 3 (the shape of things to come), and 4 (bribery in any form or shape).

One additional observation needs to be made at this point about the third sense—formal cause underlying a concrete object or piece of activity as opposed to its material cause. In this formulation of sense 3 we have emphasised how form is opposed to substance or material. In sense 3 *form* acts, at the same time, as a cover term for two abstractions—structure and system. Let us say that form appears in two modes—the conjunctive mode in which form consists in the structural or constitutive relations between part and part and between part and whole; and the disjunctive mode in which form consists in the systematic or substitutive relations between instance and instance and between instance and norm. Form in the conjunctive mode or structural form is based on and-relationships—part and part within a whole. Form in the disjunctive mode or systematic form is based on or-relationships—norm underlying this instance or that, position occupied by this element or that. In justification of this apparent digression I have to point out that some of the disputes at least about form stem from its hasty identification with just one or the other of these two modes. For example, those who emphasize the uniqueness of a work of art speak of form in art exclusively in the conjunctive mode, others would be willing to grant the possibility of speaking of form in art also in the disjunctive mode. They will tolerate, even welcome, questions such as ‘ But couldn't the poet have used this other word *in place of* the one he has actually used ? And if he hasn't, why hasn't he ? ” Again, when we speak of the form of any language, we may mean form in the disjunctive mode or form in the conjunctive mode depending on whether we look upon language as activity (energeia) or as artifact (ergon). The form of language as an activity will be disjunctive, the form of language as an artifact will be conjunctive. Similar observations could be made in respect of the form of other social institutions.

Let us now turn to the senses of the noun *form* as a philosophical term and relate them to the ordinary usage senses presented so far. (Ordinary usage sense 5 probably originated form use (iii) out of the philosophical uses set out below.)

(i) Plato (in this sense the term *idea* is more common; this use of the term *form* in presenting Plato's ideas is Medieval) : universal essence, pattern regarded as a real transcendent entity of which existing things are imperfect representations. (Compare *form*–5.)

(ii) Aristotle : formal cause. (Compare *form*–3.)

(iii) Medieval Scholastics : that which makes anything a determinate kind of being, essence. (Compare *form*–5. This sense has roots in certain Aristotelian doctrines.)

(iv) Francis Bacon : conditions for the existence of any given nature or quality by knowing which the latter would be produced. (Compare *form*–3 and *form*–5.)

(v) Immanuel Kant : one of the two a-priori forms of intuition (i.e. subjective factors of knowledge) that constitute the conditions of the possibility of experience (i.e. that mould reality as given by the senses and makes it possible to perceive and know objects), namely, space and time. (Compare *form*–3 and *form*–4. Perhaps one can say that Kant's sense arises out of an attempt to see certain formal causes as efficient causes. *Form* in ' forms of intuition ' is probably *form*–4.)

When Ludwig Wittgenstein speaks of the forms of life he is probably using *form* in a sense intermediate between ordinary usages senses 3 (formal cause) and 4 (actual manifestation). Perhaps one can say that he sees the form–3 of the manifestation as a reflection of the form–3 of the intent or energy behind the manifestation.

Since persons discussing art and aesthetic qualities use the term *form* with particular fondness, it will be useful to find uses for the five senses of *form* in such contexts.

(1) In discussing sculpture, architecture, and their extra-artistic analogues, form–1 and its opposite could be distinguished. Thus, the beauty of sculpture is both beauty of form and beauty of body.

(2) In discussing painting and the graphic arts, dance, and their extra-artistic analogues, form–2 and its opposite could be distinguished. Thus, a painting may evince a sense of form but not a sense of colour or light-and-shade or surface-texture.

(3) In discussing any art, one can say that the material of art becomes its medium by being given a form–3 in the first instance. It is this form that we miss when speak of formlessness in relation to works of art or their extra-artistic analogues.

(4) This form–3 has an underlying function, content, or spirit. Here form–4 is being attended to.

(5) In the final analysis, the form of a work of art is the shaping of the material, the shaping of the content, and the essence (form–5) responsible for its existence. In other words, a work of art is a form of life.

Style could be understood as *form* (in senses 3, 4,. 5) in relation to the material and the medium of a work of art. When we speak of forms of literature (or of poetry or of prose fiction or of music) we are using *form* in senses 4 and 5–thus tragedy is a form of fiction and a given piece of fiction may be the manifestation of the tragic form.

I trust that this linguistic analysis of the meaning of the English noun *form* is of more than parochial interest, i.e. it holds some interest for the philosophical analysis of the meaning of the term *form* in the Western philosophical tradition. (The current Indian use of nouns like *rūpa*, *ākṛti* as loan translations of the English noun *form* is of course more an offshoot of this tradition than any continuation of the classical Indian tradition. Specifically, I recommend *rūpa*, *ākṛti*, *ākāra rūpa*, and *sattva* respectively for ordinary usage senses 1–5.)

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NOTES

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1. A less jargonized but quite adequate reportive definition appears in *The Pocket Oxford Dictionary of Current English* (2nd edition 1925) : " person related to another by descent from one person through two of his or her children ". In the usage of some persons the term *cousin* is further limited to persons of own or descending generation. The expression ' of higher-than-first degree of collaterality ' in the anthropological linguist's definition can also be paraphrased as ' a consanguineal whose parents are not one's collineal' this excludes brothers, sisters, uncles, aunts, nephews, nieces, greatuncles, and so forth.

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NATURE OF ETHICAL STATEMENTS*

The question concerning the nature of ethical statements has arrested the attention not only of modern or recent philosophers but ancient philosophy too has found it so extremely attractive a subject. This shows, on the one hand, men's pernennial and sustained interest in the problem and, on the other, various intricacies which are involved in it. Though, at commonsense level, it is one of the phenomena which is, cognitively, the least difficult to see, at philosophical plane it proved most baffling and some very unusual and, at time, confused solutions have been put forward by way of discerning the nature of ethical statements.

I shall try briefly to outline some of the important attempts to understand the nature of ethical statements and, then, will discuss some of the important features which, in my view, mark out such statements from the rest.

When we look forward for certain criteria or distinct features with the help of which we may conveniently sift out ethical statement from the rest, we are in fact engaged in the dual function of discerning moral statements from (*a*) factual statements, and (*b*) other value statements. The distinction between moral statements and factual ones has mostly been quite clearly recognised though the sharpness of this distinction has often varied in its intensity. But the other distinction, i.e. between ethical statements and other value statements, has not commonly been drawn with as much precision and clarity. The specific difficulty in distinguishing the two lies in the fact that ethical statements are a sub-class of value statements. Not only this, but often they are called just evaluative or value statements as distinguished from factual or descriptive statement and, therefore, not all philosophers have found it so important and necessary to say much on this distinction. This may, however, lead a beginner to think that there is no significant difference between moral statements and other (non-moral) value statements. We still, therefore, attempt to bring out such features of ethical statements which may, in particular, indicate such a distinction.

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* The present paper is based on a talk given by S. A. Shaida in 1973.

Aristotle in fact clearly saw the need of emphasizing the two-fold distinction when he talked of moral judgements as the conclusion of a practical syllogism. To say that the conclusion of a practical syllogism was an action, was not only to emphasize the action-guiding or action-tending character of moral statements but was also to indicate the point that it is a reasoned or justifiable conclusion since it follows from the premises which together imply it. Within the context it was deemed unquestionable that reasons or justification could be supplied for an ethical statement and that once the premises were accepted as true, the conclusion was logically inevitable. However, this account of Aristotle's practical syllogism would seem appropriate if we talk of the conclusion as practical proposition rather than an action. But this would take away much of the sense from the term 'practical syllogism' as opposed to ordinary syllogistic reasoning. (This point cannot be dealt with in detail in the present paper). The action-guiding nature of moral judgements was foremost in Aristotle's mind when he talked of ethics as a practical science. . Other features of ethical statements which stand out in Aristotle's approach to this problem can, in short, be termed as objectivity, universality and reason-proneness.

It is not difficult to see that most of what Aristotle explicitly or implicitly held, has been affirmed with varying emphasis by Kant. The action-guiding force of ethical statement was emphasised by both Kant and Sidgwick through their concept of practical reason.

The distinction between ethical statement and factual statements has been clearly drawn by most of the moral philosophers i.e. Cudworth, Hume, Kant, Mill and others, but most of them at the same time recognised and tried to explain the close connection between the two. Ethical statements are indeed different from factual or descriptive ones yet they are *about* or (putting it more succimetly) *upon* facts. Again, when the question of justification or evidence is raised, the sort of justification offered are one or the other kind of facts. This has lent force to descriptivism because seemingly ethical statements turn out to be disguised descriptive statements. If the moral conclusion in fact follows from a set of factual statements, then either there is nothing peculiarly moral in the conclusion which is not analysable in terms of factual statements, or this kind of reasoning violates simple but basic canons of logical reasoning. This was the point which was forcefully asserted in Moore's 'Naturalistic Fallacy' argument and has been reassered by a host of contemporary moral philosophers like Popper, Toulmin, Hare and others. All are agreed on the issue that ethical statements are to be contradistinguished from factual or descriptive statements but not on the question as to what the former in fact are. The action-guiding, choice-guiding, emotion-expressing, injunction-giving, imperative—or prescription-expressing nature of ethical statements has been variously emphasized by one or the other. The cue for such explanations has been taken by most of them from Wittgenstein's functional-operational view of language and the language-games. That moral language is a peculiar language-game with its own criteria and norms drawn from the specific purpose to which they are employed is the common assumption behind all these theories. But most of these answers generally suffer from, what Wittgenstein has called, 'one-sided diet'. This explains their insistence on the exclusiveness of one particular aspect as the only ethical or moral meaning of these statements. On the other hand, there are philosophers like P. T. Geach and Philippa Foot who have sought to vindicate descriptivism or naturalism.

Geach, nevertheless, admits the action-guiding force of ethical terms which, in the views of prescriptivists like Hare, make ethical statements irreducible to more descriptive *analysans*. But, according to Geach, *choice* is an inalienable part of the meaning of ethical terms, and this aspect of the meaning indetermined by what he calls the *ratio* of human wants and desires, combined together with a description of situations and contexts. Hence, all the alleged commendatory or hortatory functions of ethical terms do follow from mere descriptive sense of ethical terms. The dependence of evaluative meaning on descriptive meaning is also brought out by him in his characterising ethical term like 'good' as an attributive adjective as opposed to a predictive adjective.[2] Similarly, Philippa Foot argued from the nature of evidence in the context of moral judgements to advocate the view that moral terms have no meaning except the fixed descriptive meanings which logically follow from the use of these terms and judgements.[3]

For her, any explication of ethical statements are bound to be analysis in naturalistic terms.[4]

II

Any attempt to understand the nature of ethical statement at once raises certain intricacies which are built in the uses and functions of moral language. The fact that neither it is *a priori* nor *a posteriori* raises the question as to what in fact it is. In order to find the answer we have to attend to various aspects of moral statements which distinguish them from both factual and non-moral value statements.

A moral statement is either an expression of obligation or an expression of moral evaluation, commendation or approval based on some particular point of view at a given moment. The former meaning is generally expressed through the word 'ought' which is etymologically derived from 'owe' (the word 'ought' is the past tense of 'owe')[5]. Thus, what one ought to do is something which one owes to others. Whatever may be the primitive form of owing or acknowledging that one owes, there is implicit or explicit awareness of obligatoriness being attached to these actions which are motivated by the realisation that 'one (I) owes (owe) something to someone'. The same state of affairs is brought out by 'duty' which means certain action is accepted to be both obligatory and necessary in the light of some accepted mode of behaviour or form of life.

Thus a moral statement is an expression of value or obligation which is about a person, his qualities and character, motive, intention or actions. In making such statements we are preferring, commending or doing some similar things. But at the same time we refer to presuppose or intend to imply some factual or descriptive characteristics. This is the sense which is brought out in the familiar mode of expression that a moral judgement is 'upon' something. It is indeed obvious that no moral statements can be made without there being something or some fact which is judged or evaluated. What characteristics are being referred to depend on what Nowell-Smith has called 'contextual implication'. The role and significance of facts are prominently seen in the event of justification or evidence for ethical statements. But to ask for a reason in this context is not to be confused with asking for the meaning of a word or a sentence, nor should it be taken to be a relation between the premises and the conclusion in a deductive system. Facts adduced in justification of, or reasons for, an ethical statement are themselves not ethical. Their being relevant or proper depends on some particular frame of reference or value-scheme within which one particular set of facts rather than the other becomes convincing or worth presenting. Thus the selection of reasons or justification pre-supposes values which function as models and paradigms for particular moral judgements. In other words, our general evaluations and universal-value and obligation statements serve as models or cues in the light of which we tend to pass judgements on persons and actions.

The seeming deductive model of reasoning is deceptively involved in cases of pronouncing particular moral judgements. But as a matter of fact, it is the observation of relevant similarities between the paradigm cases of values and particular judgements which justifies the latter. Therefore, any talk concerning deductive demonstration of any ethical conclusion appears to be misplaced. Moreover, since a number of values or schemes of values are possible, the possibility of contrary or even contradictory ethical conclusions can never be ruled out.

Following features, however, may point out the distinct nature of moral statements which distinguish these from both factual and other non-moral value statements. Within the scope of the present paper, I can only enumerate them with very brief explanations.

1. Universalizability :

Moral statements are universal in the sense that they are in principle addressed to, or applicable to, all persons without exceptions. A full-fledged moral judgement is universalization of a value or an obligation. The passage from 'I ought to desire X' to 'everyone ought to desiie X' is based on the realisation of relevant and partinently significant similarities in the circumstances and situations. Similarly, the passage from 'I ought to do X' to 'Everyone or anyone ought to do X' is only the explication of the implicit universality in our judgements of obligation. The well known example is the relation between the 'desire' and the 'desirable' which asserts the universalization of the object of desire. It is in this sense that we call it prescriptive. Needless to say that if what has so far been started holds good of ethical statements, then are objective and impersonal. Their being objective and impersonal, however, does not altogether abnegate presence of feelings and emotions. On the contrary, barring those few cases where our ethical statements might in some sense be completely free from any feelings or emotions, all uses of 'good'/ 'bad', 'ought'/'ought-not' and 'right'/'wrong' presuppose some feelings and emotions in their ultimate analyses. And finally, universalisability of ethical statements does also include, in one of its meanings, rationally justifiable nature of ethical statements. Rational justifiability can, of course, be proposed as a corolary from primary sense of universalizability which Kant and Hare have so forcefully adumberated. It can be understood as the possibility of justification of an ethical statement for the same reasons in all cases irrespective of personal predictions and ideosyncracies (reference to significant differences and dissimilarities should indeed be taken note of). Even a subjectivist like Sartre admitted that in making a choice one was chosing for entire humanity—though, of course, Sartre's reasons for making such an assertion were not the same as those of Kant.

2. Practical Import :

Secondly, the action-guiding function of ethical statements does necessitate it on the part of any individual, who is the author of such a statement, to act accordingly. The inability to do accordingly or the case of doing contrary has to be explained with some justifying reasons, or, else, it may be left to be explained by what the Greeks called *Akrasia* (i.e. the weekness of the will). Similarly, when addressed to others, it seeks to guide, goad, advise, commend, command or persuade others to do or to have something enjoined upon by any ethical statements. As stated above, philosophers from Aristotle onwards have stressed the need to recognise the practical import implicit in all our ethical statements.

3. Attitudes and Commitments :

Ethical Statements do presuppose certain relevant attitudes and commitments which are imperative for anyone who formulates, asserts, or accepts any ethical statement. Such a person will be said to fail in his understanding of the nature of an ethical statement if he is e.g. saying or accepting ' X is good ' but is having the contrary attitude of condemning or denouncing ' X '. An ethical statement will not be genuine or authentic unless proper and relevant attitudes are not present in the person who makes it or owns it. Likewise one is committed to do or to have something which directly follows from ethical statement. The moment we say that ' X is good/right ' we honestly realise that we have already committed ourselves to a certain position from which we cannot retrace ourselves without abandening the earlier statement. A non-committed statement, therefore, is always essentially a value-free statement. Moral commitment is essentially and more explicitly a commitment to act in a certain manner and not merely a commitment to think or to like something in a particular way.

4. Desires, Emotions and Feelings :

The psychological background of ethical statement is an inalienable element in the anslysis of such statements. The weekness of emotivism does not lie in recognising the role played by feelings and emotions in ethical statements but it is due to the exclusiveness with which they sought to identify them with the peculiarly ethical sense. An objectivist and non-naturalist like Moore was also constrained to admit that feelings emotions are to be inevitably included in any analysis of ethical words and statements. The emotive overtones of ' good ' and ' ought ' are an undeniable fact of our normal life. These are built—in features of our phenomenology of moral conscousness.

5. Social Aspect :

By and large, ethical statements have a social aspect which is more evident in obligation statements but which is clear enough even in value statements by virtue of their universality. Ethical statements, in their primary meaning at least, can never be legitimately and meaningfully pronounced on an individual *qua* individual. Statements of obligation do enjoin upon others—and in fact, upon all in a similar context—certain obligatory actions or duties; statements of value imply that if something is good for one it is necessarily good for all, other things being equal. Such statements, therefore, can never be made without taking into account the situations, hopes, aspirations, desires and other considerations involving the persons concerned. Such considerations must be relevant to assess what does or does not constitute a duty or what is or is not valuable to an individual who may always share some relevant features with others. The social reference of ethical statements has been clearly recognised by most of the Greek moral thinkers, utilitarians, many modern subjectivists, Toulmin and others[6]. But it is also implicit in all the rest of them who have not cared to make it explicitly a part of their ethical writings.

6. Seriousness :

Finally, I may state that one of the striking features of ethical statements is the over-ridingness and seriousness with which we accept or believe what ever is implied or enjoined by ethical statements. It is of course more obvious in characterising moral principles and duties, but it holds good in varying degrees of all ethical statements. Cases of deliberate lying and hypocrisy apart, all genuine ethical statements are essentially marked by a certain amount of seriousness with which we like to stand by them.[7]

Thus, the above stated features conjointly provide us with a scheme which may help us in distinguishing ethical statements from factual as well as non-ethical value statements. Some of these may, however, be shared by the latter but all the of them together are found in ethical statements alone. Generally speaking, non-moral value statements lack features nos. 2 and 6, and may be very weak in expressing nos. 3 and 5.

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NOTES

1. Though Mill has sometimes been severely criticised for obliterating this distinction, he has made it in a strikingly Humean passage in *A System of Logic*. pp. 619-20.

2. See his article, 'Good and Evil', *Analysis*, 17 (1956).

3. See 'Moral Beliefs', *PAS*, 1958.

4. Here it may be relevant to refer to yet another sort of descriptivism offered by Kovesi. Moral judgements, he holds, are like factual statements with the only difference that statements of fact describe some facts while ethical statements describe values. See his *Moral Notions*, 1967 (Routledge & Kegan Paul).

5. I am grateful to Dr. S. S. Barlingay for this point.

6. This point is well taken in the writings of Toulmin (*Reason in Ethics*), J. Kemp " Foundations of Morality ", *Philosophical Quarterly*, 1957) and W. Kneole (" Objectivity in Morals ", in *Readings in Ethical theories*, ed. Hospers and Sellars).

7. Besides Butler, Hare and Nowell-Smith, this view is found in a number of writers on ethics, specially, J. A. Brunton : " Egoism and Morality ", *Philosophical Quarterly*, 1956, J. Ladd : *The Structure of a Moral Code* (Cambridge, 1957), B. Mayo : *Ethics and the Moral Life* (Macmillan, '58) and Mendelbaum : *The Phenomenology of Moral Experience* (Free Press, 1955).

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PROF. DESHPANDE ON THE NON-DEDUCIBILITY OF 'OUGHT' FROM 'IS'

In the following pages I propose to discuss Professor Deshpande's paper entitled 'Professor Black on Hume's Guillotine'. The paper is itself a critical study of Professor Black's view on the derivability of 'ought' from 'is', which is maintained in a paper earlier published by him. Black has tried to show in his paper that the supposed gap between 'is' and 'ought' can be filled up as it can be proved syllogistically that an 'ought' statement is deducible from 'is' statement. The syllogism which Black instances to prove his point is as below :—

'Fischer wants to mate Botwinnik.

The one and only way to mate Botwinnik is for Fischer to move the Queen.

Therefore, Fischer should move the Queen.'

Here it is obvious that the conclusion which is an 'ought'-statement follows from the premises both of which are factual in character. The first objection raised by Prof. Deshpande against this argument of Black is, to say the least, very queer. I am stating the objection in Prof. Deshpande's own words.

'To say that a performative is the conclusion of an inference is to hold that an *act* is the conclusion of an inference, and it is certainly a most perplexing question how this is to be understood..'

Yet, what sense can we attach to the statement that an *action* follows logically from factual premises ?

I am afraid, what Prof. Deshpande says above is totally misconceived. It is very surprising how the elementary distinction between what a sentence states and what it expresses could escape the notice of this critical thinker. The sentence 'Fischer should move the Queen' states that Fischer ought to mate the Queen or that it is his duty to mate the Queen, and what it expresses, is the speaker's advice that Fischer should do so. If it is slightly awkward to say that sentence expresses advice, we may put the matter differently by saying that the sentence expresses the speaker's intention to advise. If this distinction is overlooked and even the intention of the speaker is included in the meaning of the sentence uttered by him then like an imperative sentence an indicative sentence too includes speaker's intention as part of its meaning. But, if both these facts are supposed equally to be the meaning of a sentence then the fact 'that the speaker states so and so' being also the meaning of a senence, the speaker would have to own stating even this fact of the second order and thus the sentence would be required to include in its meaning an unending series of facts of higher and higher orders. This regress can be easily avoided if the distinction stated above is clearly kept in view. So, in Black's syllogism it is not any act of advice that is the conclusion of the argument. It is the normative fact (to use the word 'fact' in a broad sense) that 'It is Fischer's duty to.... ', which should be taken as the logical conclusion of the argument. The interpretation of the above sentence which has led Prof. Deshpande to make such a grossly misleading objection is given by him in these words —" In Austin's terminology 'you should do M' is an implicit performative. When made fully explicit it would assume the from 'I advice you to do M'. Black is, therefore, quite right to maintain that the conclusion of his example is a performature ".

I wonder how, characterising the statement, 'you should do M' as 'implicitly performative' implies that it means that 'I advise you to do M'. The statement may be treated as performative in the plain and the simple sense that it expresses the speaker's intension to advise the performance of an action by the agent.

A point which is made in this connection by Prof. Deshpande is rather puzzling. He makes the suggestion that when Black says that factual premises 'logically imply' the ought-conclusion he might have made a confusion between the process of inference and the quite different process of giving reasons why a particular thing should be done. Explaining the distinction between these two processes Prof. Deshpande says that 'in an inference we try to find out what is logically involved in a set of statements, whereas in an explanation of conduct we try to find out the motives and circumstances which lead to the performance of an action'. As an example of the latter the following argument is given :

'I wanted money; misappropriation was the only means of getting it.

Therefore, I misappropriated it.'

According to Prof. Deshpande the conclusion in this argument does not follow logically from the premises. The fact stated in the conclusion is only causally explained by the first two statements taken together. Thus, a causal explanation of an action accounts for it in terms of the cause leading up to it while no logical explanation of it can be given in as much as an action is not logically deducible from any premises.

I am afraid, this kind of reasoning is doubly at fault. First, as stated above, it is quite wrong to think that the action of 'misappropriation' is the conclusion of the foregoing argument. It is the statement of the fact that 'I misappropriated the money' which is the proper conclusion and there is nothing to prevent it from being deduced from premises which really entail it. The two premises stated above cannot yield any conclusion as they are unconnected. If they are supplemented by a third premise like 'whoever wants money employs the only means of securing it', the conclusion 'I misappropriated the money' can be shown to follow logically from these three premises taken together. As a matter of fact the argument is enthymymetic and so if fully expanded it would be split up into two syllogisms the conclusion of one of which is a premise of the other. The two syllogisms would be as follows :—

'I want money. Anybody wanting money employs a means to secure it.

Therefore, I employ a means to secure money.

I employ a means to secure money. Misappropriation is the only means to secure money. Therefore, I use misappropriation to secure money.'

A similar account can be given of the second example 'The house caught fire because there was a leaking wire in it.' It may also be expanded into a fullfledged syllogistic inference as below:—

'If there is a leaking wire at a place then fire breaks out there. There was a leaking wire in the house. Therefore, fire broke out in the house.'

It is not, however, the case that these examples are somehow fitted into the mould of syllogistic inference. The logical (deductive) relationship of causality, necessary co-existence etc.

holds between the factual contents of the propositions (unless the propositions are tautological). So all causal and other logical explanations of facts can quite reasonably be put into the form of ordinary syllogisms with a slight ingenuity.

Another point raised by Prof. Deshpande relates to the logical deducibility of an 'order' or imperative statement as conclusion from certain other 'orders' taken as premises. He says that an order does not imply another order directly. It is only through their reference to the expected compliance with them that one of the orders may be supposed to imply another indirectly. It must here be conceded that implication between imperative premises and their imperative conclusion is not as obvious as that obtaining between indicative premises and their indicative conclusion. Still, there is no reason to deny it. A universal imperative statement like 'Ask all these boys to go' does quite obviously imply the corresponding particular imperative 'Ask some of these boys to go', without the mediation of the reference to the act of compliance with these two orders.

The last point of Prof. Deshpande concerns the simple distinction between a man's reasons for doing an action and the reasons of another man for advising him to do the action if he is not inclined to do it. It is very astounding how it could be presumed that Black did not notice this distinction and as a result maintained quite wrongly that a man's own reasons for doing a certain action were also 'conclusive reasons' for another man's advising him to do it. I don't know if Black has anywhere made such a statement or clearly implied it. Of course, my aim in refuting Prof. Deshpande's arguments in detail is not to justify every thing that Prof. Black has said in his paper. I am concerned only with showing that the assumption of an unbridgeable gap between the 'is' and the 'ought' is quite unreasonable and attempts like those of Black intended to show how the gap can be bridged must be welcomed rather than criticised on flimsy grounds.

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PROFESSOR DESHPANDE ON "GOD"[1]

I

Professor Deshpande's* position on God's existence can be summed up in the following three distinct, though connected, arguments, which we will designate as A, B and C.

A. 1. God's existence *may* be possible or impossible,

2. It is *possible* only under conditions such that the Godhead is said to possess any *one* or *two* attributes in one Person.

3. It is *impossible* only under conditions such that the Godhead is said to possess *all three* attributes in one Person. (P. 24)

4. To say that God *may* exist and to say that God *actually* exists is not to say the same thing, since they have different meaning.

B. 1. If—that is, granting, if not accepting—God actually exists, then, either his existence is *experienced* or *inferred*.

2. But since God's existence can neither be experienced nor inferred, God cannot be said to exist. No evidence can be found to fully substantiate the claim about God's existence. (p. 9–10)

C. 1. If—that is, granting, if not accepting—God actually exists, what 'role' does he play in our day-to-day life? What 'use' can God be put to in our daily life—the life that offers Science, Philosophy, Morality, Art etc. He is 'useless' for all these, "Science is frankly careless about Him; Philosophy is better off without Him; Morality has no reference to Him; Art has no need of Him." (P. 37).

2. "He appears to be a bastard begotten by Fear in the womb of Ignorance" (P. 37).

3. God *seems* to have *nothing* special to do with us men (P. 38).

4. And we men too have nothing special to do with him. (P. 38).

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[1] "God" has reference to Professor D. Y. Deshpande's longish essay published in the book form by Hind Kitab Publishers entiled "The Truth about God" (1946). All the references, therefore, are to this book.

* Hereafter I shall refer to Professor Deshpande by his popular name D.Y.

II

Of these arguments I propose to deal only with Argument A at some length, disregarding B and C, not because the latter are unimportant, but because they are rather familiar arguments in the philosophical circles and are debated almost ad nauseum. I am personally inclined to accept the view that such debates are usually at cross-purposes. It seems to me like Russell challenging Sartre and Vice-Versa. I can defend the view—if not here—that it all depends on the approach you take, how and with what do you *start* your enquiry. It is, if I may say so, Wittgensteinean position about "forms of life". But let that pass !

One more interesting reason as to why I will deal with Argument A and not B and/or C is that I find the Argument new. I can not say whether it is really original. As far as my knowledge goes—which is not very far Argument A was not noticed by me anywhere and so I thought I should deal with it here. In dealing with it I will presume that D. Y. Still holds the position in Argument A and in dealing with it my interest will be purely logical.

Let us, therefore, try to understand the Argument A in details as D. Y. put it and find out, if we can, whether, and if so in what way, can this Argument be claimed to be logically tenable.

III

1. D. Y.'s argument is based on certain definitions which we must first note. In giving those definitions D. Y. draws a distinction between 'actual' and 'possible' and says, "when we say that a thing is actual we mean that it exists. But when we say that a certain thing is possible we mean, not that it exists, but that it *may* exist; that is to say, its existence is *not incompatible* with any thing that exists. When the existence of a thing is incompatible with certain other things which do exist, we say that the former is *impossible*——To say, therefore, that a certain thing is impossible is to say that it certainly does *not* exist; but to say that a certain thing is possible is *not* to say that it exists. The latter statement merely means that it *may* exist : nothing in our knowledge conflicts with its existence. But it also means that it may *not* exist. And whether it does or does not will have to be found out by observation or inference." (P. 23)

D. Y. accepts the position that since God's existence cannot be either experienced or inferred, God's existence cannot be said to be 'actual'. And with this I have no quarrel. The interesting and disputable point that D. Y. makes is regarding the 'possibility' and 'impossibility' of God's existence. And it is this point that I would like to consider critically from the logical point of view.

2. D. Y. says, "Now it is clear that there is nothing impossible in the existence of a God who created the Universe around us. Nor is there any impossibility in the possession by Him of any one of the three attributes *singly* (stress mine). None of the facts of Science—contradicts the existence of an all-powerful God, or an all-kind God, or an all-wise God. Further, it is equally possible that this creator-God may possess, not only one, but even any *two* (stress his) of the attributes of the God-head. The creator-God may be all-powerful and all-wise, or he may all-powerful and all-kind, or he may be all-wise and all-kind. No facts conflict with his possession of any *two* (stress his) attributes. *But no being-not even the almighty—Can possess all the three attribures of infinite power, infinite goodness, and infinite wisdom.* (stress his). Such a conception is quite *impossible*. (stress his). No such *could* (stress his) ever exist," (P. 24).

3. From the above, D. Y.'s position can be stated thus :

(*a*) God-head with *one* attribute may be 'possible', since it does not conflict with facts.

(*b*) God-head with *any two* attributes may also be 'possible' since it does not conflict with facts either.

(*c*) But God-head with *all three* attributes together is 'impossible' since it does conflict with facts.

Let us consider these three statements in that order. But before we do this we should bear in mind that by 'facts', D. Y. means 'positive evil in this our world—pain, cruelty, stupidity, ignorance, disease, decay and death.'

(*a*) Why does D. Y. think that God-head with any *one* attribute is possible ? Simply because, it does not conflict with evil. Now, what does it mean to say that God-head with a single attribute is not incompatible with facts ?

It means that there is no contradiction in saying that there is all-kind God and at the same time saying that there is evil. In other words, predicate 'all-kind' is not incompatible with predicate 'evil', and so we can use both of them. But I think this is not sound. The two predicates are incompatible when they cannot be used for the *same* object without resulting in inconsistancy. It seems that D. Y. uses predicate 'all-kind' for 'God' and the predicate 'evil', *not* for 'God', but for the 'world'. And I don't see how the point of incompatibility can even be raised here. The question of incompatibility will arise only when we will attribute 'all-kind' and 'evil' to God only and say that 'God is all-kind' is not incompatible with 'God is evil'. But this is *not* what D. Y. *Says*. It may be what he *means* to say, as far as I can understand him.

But even here, that is to say even when these two predicates are applied to the different objects, namely God and world, why do we say that are not incompatible. I think, because God is only all-kind but not all-powerful and hence although he may wish that there be no evil, he has no power to forbid it from the world. Thus 'all-kind God' is not incompatible with 'evil world' and hence there is no impossibility in the possession by Him of any one of the three attributes singly. What is said about 'all-kind', can also be said about 'all-powerful' and 'all-wise'.

(*b*) What about God having any two attributes ? Is it compatible with evil in the world ? Yes, holds D. Y. And I think, the explanation put forward in (*a*) above can be, with a little modification, used in this case also. Thus 'All-kind and all-wise God' is compatible with 'evil world', because, may be, although God is kind and wise, he has no power to stop it since he has *only* two attributes in Him. Here again, as in (*a*), we can say that the question of incompatibility cannot be even raised, since the predicates are applied to different things.

(*c*) Coming to the important point in D.Y., Godhead with *all* three attributes together is incompatible with evil in the world. As D. Y. Says, " It is utterly impossible that God possesses infinite power, infinite widsom, and infinite goodness, and yet either produces or suffers to exist a large amount of evil " (P. 25).

IV

I think we can understand D. Y.'s arguments better if we keep in mind that the crux of the matter is that whereas Godhead with any *one* or any *two* attributes is not incompatible with evil in the world and so is *possible*, Godhead with *all three* attributes is incompatible with evil in the world and so is *impossible*. Regarding this position of D. Y.'s I would like to raise the following points :

1. As stated above in (*a*) and (*b*), the question of incompatibility, and therefore of impossiblity on D.Y.'s definition, cannot even be raised, since the predicates are attributed to different things and not to the same thing.
2. However, it can be said that the predicate ' evil ' is not really applied to the ' world ', but to Godhead, by saying that the real predicate is not ' evil ', but ' creator of evil ' which can reasonably be applied to ' Godhead '. And then the question of incompatibility and therefore impossibility can be validly raised, since these predicates then, can be applied to the *same* thing.
3. I think D. Y. had the position in (2) in mind and not the position in (1), although he can be taken to accept position in (1). I will, therefore, presume that D.Y. takes up the position in (2) above and raise the following point.

(4) Presuming that ' creator of evil ' is *compatible* with any one or with any two attributes, why cann't the same be said about the attributes when taken together? And conversly, presuming that ' creator of evil ' is *not compatible* with all three attributes taken together, why cann't the same be said about any one or with any two attributes ? What is, if at all there is any, the logical difference between these predicates. Is there any difference as to their logical status ? If so, what ? Strawson in his ' Introduction to Logical Theory ' gives us a definition of ' incompatible

> predicates'. He says, "When we apply a predicate to something, we implicitly exclude from application to that thing the predicate that lies outside the boundaries of the predicate we apply, but in the same incompatibility-range. By this I mean that if we go on to apply to the thing, in the same breath, one of the predicates which lie outside those boundaries, we shall be taken to have contradicted ourselves and said nothing." (P. 6)

This criterion of 'incompatible predicates' can be applied to those predicates which D.Y. applies to Godhead and it can be mantained that all three predicates—namely "all-kind', 'all-powerful' and 'all-wise'—are compatible with the predicate 'creator of evil', because the latter predicate does not lie outside the boundaries of the three predicates. Thus all the four predicates are in the same range of compatibility. And conversly, if we keep 'creator of evil' as a predicate that lies outside the compatible-range of the three other predicates, then 'creator of evil' can be as much incompatible with any one or any two as with all the three. And that is why if we accept the position that any one or two predicates are compatible with 'creator of evil', we have no logical ground to hold that the three predicates together are not compatible with 'creator of evil'. And conversly, if we accept the position that the three predicates together are not compatible with 'creator of evil', we have no logical ground to hold that any one or two predicates are compatible with 'creator of evil'. All the four predicates have the same logical status.

I am aware that D.Y.'s general position about God's existence remains unaffected even if he takes up the position which he rejects. I am also not disregarding the possibility of my not being within the measurable distance of understanding D.Y. Inspite of everything, I have raised the point only for its logical interest.

Nagpur. S. W. Bakhle

SENSIBLE AWARENESS OF SENSE-OBJECTS*

In his *Contemporary Indian Philosophy* paper, "Are There Sensations ?"[1], Professor D. Y. Deshpande takes up the concept of a sensation. He announces his programme, "To examine this concept as it is used by philosophers, and try to remove some at least of the confusion and ambiguity which are associated with the notion in philosophical literature".[2] Deshpande's analytical frame-work is similar to that of Ryle as exhibited in his paper on "Sensations"[3] contributed to the *Contemporary British Philosophy* (to which Deshpande himself refers) and in his book *The Concept of Mind* (to which Deshpande does not refer). As a result of the analysis of the notion of sensation Deshpande arrives at the conclusion that perception involves "Sensible awareness of sense-objects".[4] Concerning his analysis: Deshpande follows Ryle in distinguishing two senses of the word 'sensation', an ordinary sense (sensation I) and a technical sense (sensation 2). In connection with the identity of his views with those of Ryle on the issue of sensations Deshpande writes, "Professor Ryle has shown clearly that the psychologist's and the philosopher's use of this word 'sensation' is a technical one, quite different from any ordinary use of the word."[5] In the ordinary sense of 'sensation', i.e., in its unsophisticated sense, we speak of such sensations as "the sensations of toothache, of giddiness, of nausea and the like."[6] But the philosophers make a technical use of this word, i.e., they use it in a sophisticated sense, when they speak of "the sensations of sight, hearing, touch, taste and smell etc."[7] In his paper on "Sensations", and also in his book *The Concept of Mind*, Ryle exploded, or attempted to explode, the myth of the sensations of the second kind, i.e., such sensations as the visual sensations, auditory sensations and tactual sensations etc. Referring to these sensations Ryle says, "In its sophisticated use, 'sensation' seems to be a semi-psychological term, the employment of which is allied with certain pseudo-scientific, Cartesian theories."[8] The view that sensations precede observations or perceptions is a part of the Cartesian myth—the rehersal of the psychological drama precedes the playing of the physical drama. Deshpande supports Ryle's view when he argues against the existence of sensations 2. Ryle does not take the trouble of mentioning the name of any physiologist or psychologist or even a philosopher, that such and such a person in such a book has maintained the distinction between sensations 1 and sensations 2. By quoting from Stout the distinction between these two kinds of sensations Deshpande has provided a kind of laboratory test for Ryle's analysis of sensations. In denying the existence of sensations 2, Ryle is not quarrelling with the men of straw. The fiction of sensations 2 is a sufficiently popular fiction to attract the attention of philosophers.

While going through the main body of Deshpande's paper one may feel that he is deviating a little bit from his original programme. He announces in the introductory part of his paper, as has already been pointed out, that he is concerned with removing confusions and ambiguities associated with the notion of sensation in *philosophical literature*. But as a matter of fact he takes up only one book on this issue, Stout's *A Manual of Psychology*. Could this *Manual* be treated as a part of *philosophical* literature ? Deshpande's approach may be defended on the ground that the sort of psychology Stout wrote lacked scientific rigour, therefore, his work should be described in our idiom as philosophical-psychology. And fortunately Stout was also a well known philosopher. However, this sort of defence is not available to Deshpande. For Deshpande is in search of the samples of the psychologist's writing on the problem of sensations. Stout's selection is a careful selection. This becomes clear from his preface to the quotation from Stout. Deshpande writes, "As a representative statement of what psychologists mean by sensation I quote a few lines from Stout."[9] Thus Deshpande is concerned with Stout as a psychologist and not as a philosopher. The whole of the first section of his paper is devoted to the criticism of Stout's psychological views. Even the name of any other psychologist does not appear in this section.

The second section of Deshpande's paper again begins and ends with the views of psychologists. The first paragraph of this section reads, "It might be objected on behalf of the psychologist, that the sansations of the special senses are not of course bodily feelings...."[10] The second paragraph "The psychologists tell us that sensations are immediate experiences....."[11] The third paragraph does not make a direct reference to the psychologist, the views criticised are those of the psychologist. In the fourth paragraph again there is a direct reference, "Having cleared up this apparent complication, let us now turn once again to the psychologist's account of sensations 2."[12] Similarly in the fifth, i.e., the last paragraph of the section, Deshpande writes, "But surely psychologists speak of the attributes of sensations."[13] Deshpande remains unconcerned about the views of philosophers. He neither criticies nor comments their views in this section.

When one opens the third section of the paper, i.e., the section in which Deshpande inquires into the genesis of one's belief in the existence of sensations 2, for the first time Deshpande introduces philosophers along with the psychologists. As he says in the introductory paragraph of the section, "I think it will be instructive to inquire into the causes which may have led philosophers and psychologists to postulate sensations of the second kind."[14] Considering the discussion of the problem in the first and the second section of the paper the instroduction of philosophers in the third section seems to be quite unauthorised. One cannot avoid the feeling that Deshpande has not been fair to philosophers, particularly so when he already announced his intention of doing something with their literature. Just as he picked up Stout's psychological work on sensations, he could have picked up somebody's philosophical work on sensations. If there was no philosophical work on the issue worth consideration, then it is wrong to drag philosophers along with the psychologists. But at one time belief in the existence of sensations–2 became such a common-place belief in the philosophical circles that Ryle did not feel the necessity of referring to anybody's name for holding this belief.

There is a further reason why Deshpande should have diverted his attention to the philosophical literature on sensations. While concluding his paper he gives preference to sense-data over sensations. He rejects the view that observation entails sensation–2, but accepts the view that observation entails having of sense-data. There is no doubt that sense-data are the sorts of entities that have been at one time, extremely favoured in the philosophical circles. Though not only the philosophers, even the scientists, the artists and the artisans on occasions happen to see only colour-patches and hear buzzing-sounds, particularly when they are in their drunken state. However, colour-patches and buzzing-sounds have been given a new ontological status, or at least a new name, sense-data, only by philosophers. Are sense-data different from, or identical with, sensations–2 ? Deshpande does not feel the necessity of raising this question and, therefore, he arrives at certain questionable conclusions in his paper. Before we discuss these conclusions it would be proper on our part to assess Deshpande's argument against the views of Stout; whether or not Deshpande has succeeded in eliminating sensations-2.

Deshpande appears to have explored some new grounds for the elimination of sensations–2. He argues, " When we have sensations of fatigue, we have fatigue (which is a sensation), whereas when we experience (as the psychologist says) a sensation of blue, we experience blue which is not a sensation at all."[15] This argument is not meant for demolishing sensations–2, but simply for distinguishing them from sensations–1. What Deshpande means to say is that blue is not identical with the sensation of blue; the relation between the sensation of blue and blue is that of an *act* to its *object*. But the sensation of fatigue is identical with fatigue, that there is no such thing as the act of fatigue over and above the object-fatigue. The preposition 'of' plays two quite different roles in the expressions 'sensation of blue' and 'sensation of fatigue'. From this it follows · If there is such a thing as the sensation of blue, it is of a different *kind* from such a thing as the sensation of fatigue. Neither the Ryleans nor those who oppose Ryle should disagree with Deshpande on this issue.

Questioning the ontological status of sensations–2 Deshpande argues further, " In fact all that one finds when one looks for the *sensations* of colours and sounds, is colours and sounds, of the sensations themselves there is never a hint. If anyone should doubt this, let him try to differentiate between the sensation of colour and that of sound without mentioning colours and sounds."[16]

This argument against the sensations of colours and sounds is equally applicable to the sensations of fatigue and nausea. Try to look for the sensation of fatigue. Do you find a separate sensation in addition to fatigue ? In looking for the sensation of fatigue one finds nothing but fatigue; of the sensation itself there is never a hint. Now try to look for the sensation of blue? Do you find a separate sensation in addition to blue ? In looking for the sensation of blue, one finds nothing but blue, of the sensation itself there is never a hint. But this implies that the two expressions 'sensation of fatigue' and 'sensation of blue' have the same logical structure, or that the preposition 'of' plays the same role in both the expressions. All sensations, be they about fatigue and nausea or about blue and sound, exhibit the same ontological structure. Deshpande's present argument demolishes his own earlier argument through which he attempted to establish a distinction between two different kinds of sensations.

Deshpande's demand is questionable when he demands to differentiate between the sensation of colour and that of sound without mentioning colours and sounds. Could one refer to the sensation of colour without referring to colour ? Could one refer to the sensation of fatigue without referring to fatigue ? Could one refer to any sensation whatsoever without referring to the object of that sensation ? Sensations are not independent particulars, therefore, the question of referring to them independently of referring to their objects does not arise. How could one talk about the sensation of blue without referring to, or mentioning, blue; or about the sensation of fatigue, without referring to, or mentioning, fatigue ? But the fact that one cannot refer to, or talk about, senstations without referring to, or talking about, the objects of those sensations does not imply that there are no such things as sensations. What it implies is simply that sensations depend for their *identification* on things that are not sensations. I cannot refer to, or talk about, the Prince of Denmark, without referring to, or talking about, Denmark. This does not imply that the Prince of Denmark does not exist, or that the existence of the Prince of Denmark does not exist, or that the existence of sensations–2 cannot be questioned simply on the ground that in referring to them one is bound to refer to the objects of those sensations.

Continuing his attack on sensations–2 Deshpande denies that these sensations can have any sort of attributes. As he says, "The alleged attributes of these sensations are in reality qualities of the objects of those sensations."[17] And he has come to this conclusion because he believes that "Sensations themselves (as distinct from the objects of those sensations) are nowhere open to view."[18] It is a questionable view to maintain that sensations are not open to view. However, for the sake of argument let us grant that they are not open to view. But the fact that they are not open to view does not imply that they do not have attributes, or that we are not in a position to know about their attributes. Obviously, if sensations are not open to view then their attributes are not observed, they are inferred. Again, Deshpande has taken for granted that if something is a quality of an object then it is not an attribute of the sensation. But this implies that sensations cannot have anything in common with their objects. This view is obviously false. A sensation would remain different from its object even if it had only one attribute that is not a quality of the object in question. To maintain a distinction between a sensation and its object it is not required that nothing should be common to them. So certain attributes may really be attributes of a given sensation, and the very same attibutes may also be the qualities of the object of that sensation.

Let us now consider the fourth, i.e., the conclusive section of the paper. In the opening paragraph of the section Deshpande raises the question, "If there are no sensations (of the special senses), then how does perception take place ?"[19] There is a simple, straight forward, answer : Perception takes place directly without pre-supposing, involving, or entailing anything else. There are no sensations, so also there are no *substitutes* of sensations. But this alternative does not occur to Deshpande. And if it does occur to him, it is not acceptable to him. If not the sensations, then some other objects or entities must be there so that perception may take place. As Deshpande says, "I think that our denial of sensations–2 need cause us no insuperable difficulties. We can say that perception does not involve sensations–2, but it does involve sensible awareness of sense-objects. I think what philosophers have called sense-data are such objects."[20] So sense-objects, according to Deshpande, are not *material*; one cannot have sensible awareness of material objects. Deshpande is making a claim which requires sufficient backing. However, let us take for granted that sense-objects are identical with sense-data. And sense-data have been distinguished from sensations–2. Denying the existence of sensations–2, according to Deshpande, is not denying the existence of sense-data. He further confirms this view when he says, "Between sensations–2 and sense-data I favour the sense-data because we are certainly aware of them, whereas we are certainly never aware of sensations–2."[21] One would get the impression that Deshpande prefers the myth of sense-data to the myth of sensations–2. But are they two different myths ?

A Rylean would really be puzzled with both the remarks of Deshpande quoted above, in which he prefers sense-data to sensations–2. For sense-data according to Ryle are nothing but personified sensations. Ryle's attack on sensations–2 is meant for demolishing the myth of sense–data. Referring to the sense-datum theory Ryle says, "This theory is primarily an attempt to elucidate the concepts of sense-perception, a part of which task consists in elucidating the notions of sensations of sight, touch, hearing, smelling and testing."[22] To have a sensation, according to the sense-datum theorist, means the same thing as to be aware of a sense-datum. As Ryle further points out, referring to the sense-datum theory, that, "Having a visual sensation can be described as getting a momentary look, or visual appearance, of something, and having an olfactory sensation as getting a momentary whiff of something."[23] The momentary whiffs and looks are identical with sense-data. This becomes clear from Ryle's further remark, "You cannot get the look that I get, any more than you can suffer the tweak that I suffer. A sense-datum, i.e., a momentary look, whiff, tingle, or sound is property to one percepient."[24] Can there be any doubt that sense-data, according to Ryle's interpretation, are identical with sensations–2 ?

The question arises, whether Deshpande's concept of a sense-datum is the same as that of Ryle. For, Ryle does whereas Deshpande does not identify sense-data with sensations–2. Though Deshpande does not elucidate his own conception of a sense-datum, an account can be obtained from his writing which refers to the distinction between a sense-datum and a material object. While referring to the case in which one fails to obtain knowledge of a material object in spite of the fact that one happens to *see* it, Deshpande says, " If by ' seeing ' one meant (as was not unnatural) a purely visual mode of knowledge, what one sees would not be an orange, but only its visible aspect or look."[25] Could one mean by ' seeing ' a non-visual mode of knowledge ? Could one obtain the taste or smell of an orange just by seeing it ? The full import of Deshpande's remark is not clear. But it is quite clear that Deshpande makes a distinction between knowledge of such a material object as an orange, and knowledge of its visible *aspect* or *look*, i.e., the visual sense-datum of an orange. It is possible to have a look at the *look* of an orange without having a look at the orange itself. Deshpande's notion of a sense-datum is not very different from that of Ryle except that Ryle does whereas Deshpande does not identify a sense-datum with a sensation. There is a further point of disagreement. According to Ryle it is nonsense to talk about the existence of sense-data. To talk about the existence of a visual sense-datum would be to talk about the possibility of looking at the *look* of things. Sensing a sense-datum, as is clear from Deshpande's remark is accepting the possibility of having a look at the *look* of things. But it is quite absurd to have a look at the *look* of things. This absurdity can be swallowed only by a sense-datum philosopher.

The above quotations from Ryle are sufficient to show that Ryle does not distinguish sensations–2 from sense-data. The thesis that observing entails sensations and the thesis that observing entails sense-data are not two different theses, but one and the same thesis, or one and the same pseudo-scientific, Cartesian explanation of observation. While explaining the sense in which " observing entails sensations " Ryle points out, " A man could not be described as watching a robin who had not got a single glimpse of it, or smelling a cheese who had not got a whiff.[26]" The expressions ' a single glimpse ' and ' a whiff ' stand for sense-data. Watching a robin (material object) entails having a glimpse (sensation, sense-datum) of it. Similarly, having the smell of a cheese (material object) entails having a whiff (sensation, sense-datum) of it. It is because of the identity between a sensation and a sense-datum that Ryle argues against the sense-datum theorists that they have assimilated "the concept of a sensation to the concept of observation."[27] If having a sensation is the same thing as being aware of a sense-datum, then the distinction between sensation and observation disappears. A sensation itself becomes a species of observation.

Before casting his vote in favour of sense-data against sensations–2, the proper course for Deshpande would have been to show that sense-data are different from sensations–2. It is quite possible that Ryle is wrong about the issue and Deshpande is right. But he has to establish that he is right. Concerning the difference between sense-data and sensations–2 Deshpande gives only one argument in the whole of his paper, that we are aware of sense-data whereas we are never aware of sensations–2. What would it mean to be aware of a sensation–2 ? If the momentary glimpses and whiffs etc., are sensations–2, then we are certainly aware of them. Deshpande does not deny one's awareness of a sense-datum, therefore, he should also not deny one's awareness of a sensation–2. For he seems to maintain the position that he is using the word 'sensation' in the same sense in which Ryle has used this word. Nowhere in his paper Deshpande is found arguing that the momentary glimpses and whiffs etc., are not sensations–2, that they are simply sense-data. Deshpande does not mention anywhere in his paper that he has any sort of disagreement with Ryle on the issue of sensations, that Ryle is wrong in dissolving the distinction between sensations–2 and sense-data. Rather, he gives an opposite impression in his paper, that he is advocating and defending Ryle's position on the problem of sensations.

Ryle's position on the issue of sensations–2, i.e., his refusal to observe them, is not free from objections. I may refer, as an example, to the objections raised by Professor Campbell Garnet. In connection with Ryle's arguments concerning the problem of sensations Garnet points out that Ryle "Substitutes the phrase 'glimpse of' and 'whiff of' for 'sensation of' (pp. 206–7). Yet he has himself noted that these are observation words, not sensation words. A glimpse of a robin is not a sensation of robin, but a brief observation of a robin".[28] One of the reasons for Garnet's distinction between momentary glimpses and whiffs and the so called sensations is to avoid the absurd situation that in observing a sensation, "one must have a sensation of a sensation."[29]

However, Garnet's distinction between 'glimpse of' and 'sensation of' fails to provide much support to Deshpande's view. For Deshpande denies whereas Garnet maintains the possibility of sensations being observed. As Garnet says, "In the observation of a physical object sensations are a part of what is noticed. They are, therfore, part of the total object observed and the only sense in which it can be claimed that sensations are not observed is that they are not observed in isolation, because observation is a process of connecting and linking up the distinguishable items of experience by noticing their relations—including the time setting in which they occur."[30] Garnet accepts the absurdity of the view that one obtains the *glimpse* of a glimpse, i.e., the look of a *look*. But there is no absurdity in obtaining the glimpse of a sensation. What is required to obtain the glimpse of a sensation is simply that one should have a glimpse of a robin or any other material object. A seperate glimpse of a sensation is an absurdity. Again in saying that one has a glimpse of, i.e., notices, a sensation, it is not required that one should be led to accept the absurd position that 'one has the sensation of a sensation'. Thus Deshpande's position remains objectionable even if Ryle is wrong in identifying sensations with sense-data. For what is absurd is not observing a sensation but observing a sense-datum.

Deshpande is found advocating the popular form of phenomenalism when he says, "The senses present to us their immediate objects, out of which then the mind constructs a perception of a physical object."[31] Deshpande's *immediate objects* are sense-data. The physical objects are constructions out of sense-data. Whether they are logical constructions or just non-logical constructions is not clear. What is clear is that the perception of a physical object is preceded by the presentation of sense-data. But it is against such views as these that Ryle wrote what he wrote about sensations. Even a cursory glance over the chapter on "Sensations and Observations" from *The Concept of Mind* would reveal that Ryle's distinction between the two kinds of sensations, sophisticated and unsophisticated, is meant for attacking phenomenalism.

The most puzzling feature of Deshpande's paper, particularly its conclusion, is the expression of his *intuitive* faith in phenomenalism. He does not provide, nor feels his responsibility to d so, any argument in favour of his sense-datum analysis of perception. Rather, he clearly refuses to put forward any argument in favour of his position. As he says, " I wish to make one thing absolutely clear—I do not wish to advocate or defend the sense-datum theory."[32] Though he does not defend he does advocate the sense-datum theory. But what is the significance of advocating a theory if one fails, or refuses, to defend it ? After showing his preference for the sense-datum analysis of perception Deshpande concludes his paper, saying, " The larger questions of Epistemology and Metaphysics I leave to those who are qualified to tacle them."[33] Thus, the responsibility of defending the status of sense-data depends on others. Deshpande's own job is over once he successfully brought the sense-data into existence. But it is a bad Ethics to impose one's own offsprings on others.

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NOTES

1. *Contemporary Indian Philosophy*, (second series) Edited by Margaret Chatterjee, London, 1974.
2. *Ibid.*, p. 42.
3. *Contemporary British Philosophy*, (Third series), Edited by H. D. Lewis.
4. *Contemporary Indian Philosophy*, p. 49.
5. *Ibid.*, p. 42.
6. *Ibid.*. p. 42.
7. *Ibid.*, p. 43.
8. *The Concept Of Mind*, p. 191.
9. *Contemporary Indian Philosophy*, p. 43.
10. *Ibid.*, p. 45.
11. *Ibid.*, p. 45.
12. *Ibid.*, p. 46.
13. *Ibid.*, p. 47.
14. *Ibid.*, p. 48.
15. *Ibid.*, p. 44.
16. *Ibid.*, p. 47.
17. *Ibid.*, p. 48.
18. *Ibid.*, p. 47.
19. *Ibid.*. p. 49.
20. *Ibid.*, p. 49.

21. *Ibid.*, p. 50.
22. *The Coucept Of Mind*, p. 200.
23. *Ibid.* p. 201.
24. *Ibid.*, p. 201.
25. *Contemporary Indian Philosophy*, p. 48.
26. *The Concept of Mind*, p. 197.
27. *Ibid* , p. 203.
28. *The Perceptual Process*, London, 1965
29. *Ibid.*, p. 35.
30. *Ibid.*, p. 35.
31. *Contemporary Indian Philosophy*, p. 48.
32. *Ibid.*, p. 49.
33. *Ibid* , p. 50.

REALITY AND UNREALITY OF TIME (I)

I propose to dedicate this series of three articles to the philosophising of Prof. D. Y. Deshpande (referred to hereafter as D. Y.) on the concept of time. The nature of these articles is by and large exegetical. An attempt will be made to bring together some of the loose ends of his thinking on what may be regarded as 'one of the proverbially imposing and majestic themes of philosophers'. D.Y.'s. papers[1] do reflect a very deep and profound concern for removing some of the misconceptions about 'time' and to develop an analytic perspective which would contribute in a large measure, he hopes, to the proper understanding of the nature of that supposedly intractable concept. Reading of these papers not only elevates the image of their author who already enjoys a great esteem among the contemporary philosophical circles, but also reveals the fact that he does not want to cash on certain accredited opinions of the traditional philosophers, nor does he want to base his views on the disclosures of mystic visions. "In philosophy........we have ultimately to rely on reason alone.."[2] That is his firm conviction and it's the one which he carries all through in his treatment of 'time'.

Of the six papers of his, which bear on the theme the two on 'Bergson's Philosophy of Time' reveal his aversion to the kind of phenomenological but extremely problematic approach which Bergson adopts in construing the reality of time or rather in construing reality as 'time' and nothing else. D.Y. is highly critical of Bergson's views. His searching criticism should indeed serve as a caution for all those who would still want to indulge in such speculative adventures. The other two papers viz., 'McTaggart on Time' and 'The Alleged Unreality of Time', contain his attack against the idealistic line of thinking on 'time'. It is worth noting that in the very first published article of his career,[3] D.Y. is not at all happy with the 'hocus-pocus' of the idealists. It is, therefore, not unexpected that D. Y. is least convinced of the idealistic argument contending the unreality of time. One need not, however, suppose that D.Y. would want to reject the idealistic version of time as unreal, in the manner of G. E. Moore, who, depending upon the so-called unmistakable deliverances of common-sense, allowed himself to be carried away by the conviction that the idealistic thesis must be false. Unlike Moore, D.Y. is prepared to fight the idealistic opposition by entering into a forbidding jungle of metaphysical and epistemological issues. His paper on 'McTaggart on Time" will ever remain an ideal example of a well-knit philosophical exercise reflecting his talents of analysis, his scholarship and the indomitable spirit with which to pursue a philosophical argument to its last shred. The remaining two papers viz., 'Professor Ayer on the Past', and 'Past, Present and Future—A Philosophical Analysis' together constitute his demolition of Ayer's argument concerning the "extensive" and the "transitory" aspects of time and his own "way" of looking at 'Past, Present and Future'.

Accordingly, one has to divide D.Y.'s philosophising on 'time' into three sections each one dealing *seriatim* with the three phases indicated above. All three put together suggest that D.Y.'s thinking reveals two sides. On the negative side, D.Y. reveals an anti-metaphysical trend and on the positive side, he appears to be proposing something like a Wittgensteinian project of deciphering the deeper grammar of expressions connected with time. D.Y., it is to be regretted, does not carry out this latter project fully either in his papers or elsewhere. Perhaps he has left the terrain to the analytic minded philosophers of the younger generation for fuller exploration. The present series also does not propose to cover the terrain and to explore it further. But it certainly confines itself to the very modest attempt of reporting and commenting upon the two sides. This paper is, however, restricted to the first phase of the negative side of D.Y.'s treatment, with a promise that the remaining two phases will be undertaken in separate papers at a later time.

I

Citing the usually-held view that time and space are largely similar although there are real differences, D.Y., in his pains taking examination of Bergson's Philosophy of time, first indicates briefly the main features of Bergson's radically different theory that space and time are entirely different from each other and that those temporal features in which time seems to resemble space are not really temporal at all but only spatial. Relying upon the two principles that (i) the intellect is not an instrument of speculation or theoretical knowledge but is an instrument of practice, and (ii) space and what is commonly supposed to be time but which in reality is nothing but space, are the forms of intellect, Bergson had developed a view that intellect in the interest of action, decomposes the ceaseless, continuous flow of reality into a succession of static states of relatively stable objects with clear-cut outlines. Intellect cannot thus present to us reality as it is in itself. To see reality as reality, we must abandon the analytic intellect and enter into our innermost being. It is *intuition*, which alone can enable us to develop what Bergson called, "the kind of intellectual sympathy by which one places oneself into an object in order to coincide with what is unique in it and consequently inexpressible."[4]

D.Y. lists the following reasons which, according to him, led Bergson to expound a very strange and startling equation of '*durée*' with '*realité*'.

(i) Our inner conscious life is just one ceaseless stream of change, a duration without mutual externality of successive states.

(ii) The material objects or what we call matter is in itself nothing but a process which makes or unmakes itself but is never something made.

(iii) The real time is the *duration*, which is the very stuff of reality.

(iv) Time with which science deals and which admits measurement is just an another utilitarian device like space and hence is not to be confused with the 'real time'—the '*duration*'.

(v) We fail to notice this because our intellect operates mostly like a cinematograph which decomposes into a series of static views what in reality is continuous, undivided movement. We fail to see that intellect decomposes the flux of reality into solids having definite and clear outlines.

(vi) Bergson claimed that it is his view of 'time' as 'reality'—duration which is accessible to intuition alone—that accounts for creativity and freedom—the two inalienable aspects of human activity. In concrete '*duration*', the same reality never recurs. Determinism which requires that the same cause should have the same effect, is a perverse theory produced by the intellect which is clearly in conflict with the creativity and the freedom of will, the two foundations of aesthetics and morals.

The validity of all these reasons must mainly hinge upon two important points : (*a*) intelligibility of the Bergsonian notion of '*duration*' and (*b*) tenability of his strictures against the analytic role of the intellect. D. Y. argues stoutly against both these points.

(*a*) In order to develop a peculiar view of reality as identical with '*duration*', Bergson has to justify the following argument :

(1) Duration is a *succession of interpenetrating moments* in which past is preserved and prolonged into present and future.

(2) Past is preserved only in the memory.

(3) Memory cannot exist without consciousness.

Therefore,

(4) There can be no succession without consciousness.

We may accept (3), although one need not suppose that it is unambiguous and philosophically inoccuous. D.Y. does not find it necessary to comment upon it since he considers (1) and (2) to be highly vulnerable premises of the argument and therefore (4) to be non-compelling. I think that D.Y.'s argument against (1) is a brilliant piece of reasoning. D.Y. points out first that if the definition of 'duration' as given in (1) is to work at all, then it is obvious that *interpenetration* (of moments in which past is preserved and prolonged into present and future must constitute an essential feature of '*duration*' or '*time*' (understood in the Bergsonian sense) alone and of nothing else. But one can hardly maintain this. Interpenetration is not peculiar to 'time' or 'duration' alone. Space itself which is contrasted by Bergson with 'duration' in every respect, is, strangely enough, a good candidate which would pose a serious threat to Bergson's theory. This apart, D.Y.'s main objection to (1) is that the interpenetration of past, present and future in consciousness does not necessarily account for *succession* which constitutes the essential feature of 'duration'. Memory and an cipation, the two states of consciousness which Bergson associates with past and future, being contemporaneous with the present state of perception, do not really explain 'succession'. They are merely present states of consciousness. If that is so, Bergson can legitimately speak of *simultaneous* states of mind as being not discrete. He can maintain that they are fused together to form a certain span of our limited *awareness* of past, present and future. He can at the most succeed in showing that the *simultaneous* contents of our mind interpenetrate but there is nothing in the contents of our consciousness at any moment, which reveals to us interpenetration of past, present and future. D.Y. notes with characteristic acerbity of philosophic mind that the whole doctrine of interpenetration in Bergson's philosophy of time is confused to a degree. Even in drawing the distinction between space and time which is of paramount importance for Bergson, he is not consistent. Bergson declares "that where as the points of space are external to one another, the moments of time interpenetrate". D.Y. points out that the examples of temporal interpenetration which Bergson provides are not of moments interpenetrating but of states of consciousness interpenetrating. "This, I am afraid, is objectionable. The comparison must be drawn not between space on the one hand and the states of consciousness on the other, but between space and time or between the *contents* of space and the *contents* of time".[5] This, I suppose, takes the wind out of Bergson's sails.

II

(*b*) I shall not pause here to comment on Bergson's failure to draw the distinction between space and 'duration' that is central to the viability of his view of reality, which cannot even get off the start unless (1) is justified. From what has been already said, the failure is glaring. Nor shall I comment upon D.Y.'s treatment of (2). Most of the points which he makes are well-thought-of and I think that he succeeds in showing that the preservation of the past in memory can only be taken to mean that it can retain a *reprsentation* of the past to be brought into relation with the perception of the present. All that this can accomplish is the *knowledge* of succession and not succession itself. Memory is neither a necessary condition for the occurrence of a succession nor a sufficient condition for the knowledge of succession. Bergson is fully exposed on the count of his use of figurative expressions such as 'preservation of past', and 'real time, leaving the mark of its tooth on whatever it touches'. One is certainly driven to one's wit's ends when one reads several analogies which Bergson uses to bring home a *philosophical* point.[6] This is a point which Russell had made long ago when he observed that "as a rule Bergson does not give reasons for his opinions but relies on their inherent attractiveness and on the charm of an excellent style. Like the advertisers of Oxo, he relies upon picturesque and varied statement and an apparent explanation of many obscure facts. Analogies and similies, especially form a very large part of the whole process by which he recommends his views to the reader".[7] The analogy which he draws between intellect and cinematograph is not only misleading but also utterly fallacious. One can, however, see why a philosopher who condemns intellect has to draw so much upon similies and analogies and to depend upon a mysterious charm of his style. A philosopher who wants to condemn intellect cannot in fact use intellect to justify his claims but must base his case on intuitions. Condemnation of intellect with the help of arguments is always self-stultifying but forgetting this, Bergson, at a number of places in his works, employs intellect "in his own defence by advancing arguments which plainly are intended to be intellectually satisfying."[8] D.Y. is also using intellect in his refutation of Bergson's refutation of intellect. One need not lay the charge of question-begging at the doors of D.Y. The battle between intellect and intuition is an old one and is finally tied up with what you mean by doing 'philosophy'. If in philosophy, as D.Y. asserted, we have ultimately to rely upon reason and reason alone, it is very difficult to see how inspite of all the forceful pleas made in behalf of Bergson by M. Wildon Carr and Pitirim Sorokin[10] and Rev. John MacWilliam"[11], one can persuade oneself to accept Bergon's highly speculative vision of reality. In the words of Bertrand Russell, one may suppose that when Bergson's "philosophy has triumphed.....the arguments will cease, and the intellect will be lulled to sleep on the heaving sea of intuition, but until that consumation, the protests of intellect will continue".

III

D.Y. has, however, not touched upon an another soit of confusion which is basic to the Bergsonian way of conceiving 'duration'. The confusion can be brought out by reference to a distinction made by Pitirim Sorokin[12] between "*sensate time*" that can be reduced to quantitative measurements and the "*ideational time*" which has a characteristic quality connected with the evolution of the universe. Bergson's '*duration*' is ideational time. This distinction is often referred to as the distinction between 'physical time' and 'psychological time'. We may leave aside for the present the question as to whether space and time are similar or dissimilar to each other. But one certainly expects that a philosopher who wants to cash on the notion of 'ideational time', undertakes to show at first that there is a real distinction to be drawn between *sensate time* and *ideational time*. Why does he have to argue at first that *sensate time* is nothing but space ? That we measure *sensate time* by reference to space is no more reason to identify it with space than there is any for identifying the temperature of the human body with the column of the mercury in the thermometer. 'Duration' which is so very crucial to Begson, can be said to be only a mode of *sensate time*, understood in different ways by means of operational definitions. These operational definitions are given by us in terms of the reading of the angle traversed by the hands of the clock, no matter whether the clock is moved by falling weights or by elastic springs. The operational definition is connected with a certain law of mechanics, having to do with the oscillations of the pendulum or of the hairspring. It is necessary to note that if *sensate time* can be measured in terms of spatial modes, space can also be measured in terms of time as is clear from the notion of 'temporal distance' which allows the scientists to formulate the laws for the propagation of light or of electro-magnetic waves in a simple way. Bergson's case for understanding 'duration' in his own sense rests upon the protest that besides all the definitions of *sensate time* by physical operations, there really is an immediate feeling of time. Bergson wants to cash on this immediate feeling. But if you call it 'duration' then that immediate feeling of time is no more than an operational definition. It simply means that human beings can measure time by reference to their subjective sensation of time. There is nothing more to it. Bergson, unfortunately, imparts to the expression 'duration' a meaning which does not belong to it. Bergson could afford to throw the phrase out of its gears, we certainly cannot.

Bergson's entire account of freedom, creativity and unpredictability of future is based upon this 'out-of-gears' notion of 'duration'. If you reject the queer sense which Bergson gives to 'duration', you are not indeed obliged to accept Bergson's account of free-will, creativity and unpredictability of future. D.Y. rejects 'duration' in the Bergsonian sense and yet takes seriously Bergson's argument that time is reduced to mere appearance if we regard the future as unpredictable. D.Y. tries to show that time would be real even if the thesis of determinism is true. But I think that the point which D.Y. is trying to make is unnecessary and futile. If D.Y. is trying to show that *sensate time* is real even if determinism is true, then this will have no force whatsoever against Bergson's claim that determinism is incompatible with 'real time' or 'duration', taken in the Bergsonian sense. Nothing will be gained by showing that determinism is compatible with 'time' taken in its non-Bergsonian sense, i.e. sensate time. Bergson's argument is irrefutable, not because it is intrinsically flawless but because it's of such a nature that any evidence which you bring against it will fail to count as counter-evidence. Not only D.Y. cannot refute the argument but none else can. Nature may be free creative, and the future may be unpredictable, but not for the reasons which Bergson offers. One cannot afford to wind one's way to the truth of these assertions, through blind alleys which Bergson's philosophy provides.

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NOTES

1. (i) 'Bergson's Philosophy Time '(I), *Journal of The Indian Philosophical Association*, Vol. I, 1954, pp. 41–45.

(ii) '*B*ergson's Philosophy of time ' (II), *Journal of The Ind. Philo. Association*, Vol. II, 1955, pp. 41–43 [Referred to as BPT (II) hereafter]

(iii) 'McTaggart on Time, '*Journal of The Ind. Philo. Assn.* Vol. III 1956, pp. 71–96.

(iv) 'The Alleged Unreality of Time,' *Proceedings of The Ind. Philo. Congress*, 1956, pp. 207-11.

(v) 'Prof. Ayer on the Past,' *Mind* vol. LXV, 1956 pp. 85-89.

(vi) 'Past, Present and Future-A Phiosophical Analysis,' *Nagpur Uni. Journal*, 1948, Vol. No. 12, pp. 1-15.

2. 'Mayāvāda,' *Journal of The* Uni. of *Bombay*, Vol. XIV Sept. 1945, p. 57.

3. *Ibid.*

4. Bergson, Henri : *Introduction to Metaphysics*, p. 6.

5. *BPT* (II), p. 45.

6. *BPT* (II), p. 53.

7. Russell, Bertrand : *The Philosophy of Bergson*, London, 1914, p. 11.

8. *Ibid.* p. 36.

9. Carr, H. Wildon : *The Philosophy of Bergson* by the Hon. B. Russell with a reply by H. Wildon Carr, London 1914.

10. Pitirim Sorokin : *Social and Cultural Dynamics*, New York, 1933.

11. MacWilliam, Rev. John : *Criticism of the Philosophy of Bergson* Edinburgh, 1928.

12. *op cit.*

MANNEYS

FOR

BOOKS

7 Arsenal Road, Poona 1

‘SCIENCE, TECHNOLOGY AND VALUE’*

My Happiness about this Golden Jubilee Session :

This 1975 Session of the Indian Philosophical Congress is its 50th, that is the Golden Jubilee, Session of the Congress : and I feel so very happy about it, as I happen to be one of the few living Members of it at present, who had the good fortune of being present at the very *First* Session of it held in 1925 in Calcutta, with the initiative and under the benign Leadership of the Late Dr. S. Radhakrishnan, then King George V Professor

INDIAN PHILOSOPHICAL CONGRESS

GOLDEN JUBILEE SESSION, DELHI.

ADDRESS AND REPORT

Subject for this Session :

This Golden Jubilee Session comprises *six* Plenary Sessions, each of them being assigned its own specific subject or topic : and this Second Session has ‘Science, Technology and Value’ as such its topic assigned to it.—I propose very briefly to indicate in this my Inaugural Address my own orientations, outlooks and indications with special reference to the said subject, which will then be treated by the Participants in their own ways in their Papers contributed to this Session.

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* Prof. D. D. Vadekar's Presidential Address to the Second Plenary Session on ‘Science, Technology and Value’, 30-12-1975, in the 50th (Golden Jubilee) Session of the Indian Philosophical Congress, held under the Auspices of the University of Delhi, Delhi-7.

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Knowledge on Three Levels :

Now, a most fundamental fact or phenomenon of man's life is. Knowledge,—Knowledge of his environment and of himself, which is concurrent with all life as such, and in particular, with human life. Knowledge, which man is perpetually busy gathering, is man's very necessary basic equipment in and for his life, which enables him to effect a comfortable adjustment between himself and his environment. This Knowledge, in its development, emerges and operates on *three* levels—common sense, science and philosophy. *Common Sense* knowledge is generalised only piecemeal, and is in the nature of practically useful *Information* of its different objects in the life's environment, and is mostly on the *perceptual* level, whereas *Scientific* knowledge is a systematically departmentalised and methodically and deliberately pursued theoretical *Apprehension* of its various objects in the world, and is typically on the *conceptual* level; and *Philosophy* is a systematically organised and synthesised reflective *Comprehension* of its one and sole object, viz., the world or the universe as a whole, and is typically on the *speculative* level.

Knowledge as Discovery and Invention :

Science and Technology : Now, Knowledge on all these three, viz., common sense, scientific and philosophical, levels in human life does not remain merely on the inoperative, theoretical-cognitive level, but percolates to the practical-conative levels in life, where it motivates man to effect, with its help, suitable and comfortable adjustments with the various facets or aspects of his life's environment, both within and outside himself, which he *discovers* in that Knowledge : and this adjustment comes to be effected with the use of suitable means or tools or instruments, which that knowledge also helps him to *invent* or construct.—Thus, Knowledge is, in human life, the fundamental source of man's most important two-fold equipment in life, viz., (1) the *discovery* of the facts and facets of his life-situation, and (2) the *invention* of the *values* or goals in life and of the *techniques* by way of the devices and means for their realisation on the basis of the *discovery* of those facts. It will thus be seen that this Knowledge is two-fold in its nature—of the nature of both *discovery* of the facts and *invention* of techniques.—Without referring to the *three* levels of knowledge above referred to, and in unsophisticated terms in ordinary and practical usage, it may be said that '*Science*' is knowledge in the sense of '*discovery* of facts', and that '*Technique*' or '*Technology*' is the knowledge in the sense of '*invention*' of devices.—'Science', in its literal and unsophisticated, broad and general sense, discovers the nature of man's life-situation: and 'Technology' invents, by the help of science, devices or instruments, which enable man to realise his desired goal or fundamental value in life, viz., satisfaction, which is in the nature of an amalgam of a sense of harmony with the environment and of consequent happiness about it.—It may be noted that, taken in this broad sense, 'Science' and 'Technology' are as old as human life itself, which, from its very incipient stages in the evolution of man, is characterised by its scientific and technical orientation, outlook and efforts. Man is and can be said to be the *only* tool-making and tool-using animal, even though at the sub-human stages of animal life these processes of making and using tools may be noticeable in their very primary and incipient stages.—And it may also be noted that 'Science' and 'Technology' in human life keep on continually and concurrently developing and also have their mutual impacts on each other in and for their development.—Science leads to the advancement of technology, as can be seen from the fact that from the developed physical sciences has emerged man's technological use of air-crafts for his space journeys, which have now been extended to the Moon, Mars, and other planets round the earth; and these extended space-craft journeys, in their turn, have added a lot to man's knowledge of the planetary universe, and may even lead to the discovery of life on some of the planets; and this knowledge again, in its own turn, has developed into a very sophisticated technology of the radio and allied or similar systems of communication.

Human Civilisation Based on Technology :

It is to be noted, further, that Science and Technology emerge in human life mainly from man's natural equipment by way of his analytical and synthetic, critical and constructive reason; and, as such, they are naturally conterminous with, and have figured in, human life from its beginning to date. The primitive man's efforts to secure food (vegetables or animals) or shelter

(thatches) for himself illustrate his use of his primitive science and technology : and today there is nothing in human life which is not the product of his science and technology of today. The room I sit in, the book I read, the table and the paper I write on, or the pen I write with, etc.—these are all products of the mutual impacts of science and technology in human life.—This is true also of all the sectors of the life of man—social, political, national, international, etc.—In fact, all civilized life is technology-based, and, in its essence, it means life based on or conditioned by the various techniques developed by man on the basis of his science i.e. knowledge. Civilisation means, or is essentially characterised by, the peculiar pattern of the technical arts and their material products, which develop on the basis of science as at a given stage, and which figure in and shape human life in a society at that particular stage of its development. (We have thus many civilisations, which have appeared in human history, e.g., Indian, Egyptian, Assyrian, Babylonian, Greek, Roman, etc.). Civilization, in brief, is mainly the pattern of the life a society as shaped by science and technology as developed at a given stage of its evolution.

Problems Created by Technology :

It is obvious that the development of scientific technology has its far-reaching effects on, and leads in various ways to vital changes in, the life of the society and creates very vital problems in it : and this is especially true about the social and national life of our modern and contemporary developed societies in the whole of the world today, though it is true to some exrent also about our developing societies including ourselves also. It is not possible here to enter into any detailed consideration of this point : but it would be interesting to note some typical representative *criticisms* of the impacts of technology, which really indicate the *problems* created by those impacts. For instance, Robin Clarke of the U.S.A. has said : " To summarise : the principal criticisms of modern technology are : high pollution rate; high capital cost; exploitative use of natural resources; capacity of misuse; incompatibility with local cultures; dependence on a technical specialist elite; tendency to centralise; divorce from traditional forms of knowledge; and alienating effect on workers."[1]

Varied Impacts of Technology :

Development of Technology also has, in particular, its impacts on our life, by way of social changes brought about by it; and a good deal has also been written about such changes, though we cannot afford to go into these phenomena in any detail. But it may be desirable to note that Technology (1) causes and accelerates social change through various avenues—the automobiles, the motion pictures, radio and television, aviation, atomic energy, etc., and (2) influences industry, communications and transportation, agriculture, medicine, war, etc., and also (3) creates trends and crises and raises vital problems of adjustment with them.[2]

Technology and International Relations :

Technology has also had its impacts, right from the beginning of human social–political life, on the International Relations : and a good deal of thought has been given to this subject by the Western experts in the field.—W. R. Schilling, for example, has said : " The relationship between technology and international relations has been continuous and intimate. From the time of man's most primitive politics, the foreign-policy problems and opportunities of states have been influenced by the nature of technology for transport, communication, warfare, and economic production. The glory of Athens rested on silver mines, and the might of Sparta on a process of making steel; the Romans ruled through roads, and the Assyrians overran Babylon and Egypt with chariot. Contemporary effects of hydrogen bombs and inter-continental missiles dramatise a relation between technology and power and between power and policy that goes back in time through steam engine and gun powder to the ox, hoe and sword and into pre-historic time."[3] Schilling has also dealt, in this Article, with the characteristics of and trends in the relationship between Technology and International Relations, and he concludes with this following indication of the prospects of that relationship : "It is a safe prediction that the foreign-policy problems and opportunities of states will continue to be influenced by technological change."[3]

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[1] *Vide* American Review, Vol. 19, No. 4 (Summer 1975)-Robin Clarke's Article on 'The Need for Alternative Technologies', p. 80.

[2] *Vide* F. R. Allen and Others : Technology and Social Change, Appleton–Century–Crofts Inc., New York, 1957.--Perhaps there are also *other later* Books on the subject.

Consideration within the Delimited Scope of Personal-Social-Moral Life :

With this background of the significance of Science and Technology in and for human life in all its stages right from its beginning and at all its levels,—individual, social, national, political and international, we have now to proceed to consider their impact on the phenomena and operation of Values in our contemporary human life.—However, I am not competent and cannot be expected in the present context to be able adequately to deal with this problem in all its facets and at all the levels of our modern human life.—Accordingly, I propose in what follows to deal with the problem only in the context of the personal-moral life of the human individual in the set-up of developing societies like ourselves, and with reference to the question regarding the preservation of the abiding value or values in human life, not on the high speculative—theoretical level of moral philosophy, but on the practical level of the concrete routine life of the individuals.—Now, if I remember right, T. H. Green has said in his *Prolegomena to Ethics* that the *form* of the ideal of human life abidingly remains the same, even if the *content* of it may change from stage to stage in human development; and this abiding form is *self-realisation*, which may be interpreted to mean the maintenance of the normal health and the progressive sublimation or perfection of the physical—bodily and mental—spiritual facets or strands of human nature, leading to man's adjustment and satisfaction with his life's environment and to his overall happiness in life. (Medical sciences have laid down the norms of physical—bodily health and happiness, into which we need not enter here.) Modern Psychology has held that cognition, affection and conation are the three cardinal strands or constituents of man's nature : and accordingly, progressive development of them in his relation with the world or the universe around him as his life's environment, consummating in his adjustment with it and the satisfaction or happiness emerging therefrom, is the abiding supreme value in the concrete routine of human life.

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[3] *Vide* W. R. Schilling's Article on 'Technology and International Relations', in D. L. Sills' International Encylopaedia of the Social Sciences, Volume 15, pages 589 ff., The Macmillan Company and the Free Press, 1968.

Impacts of Science and Technology and the Ways to Meet Them in Life :

It would now be desirable to locate and indicate, in a general way, (1) the impacts or effects of science and technology on the (personal and social) life of men, and (2) the ways to meet them with a view to maintaining the health and happiness in their physical and spiritual life, in our contemporary set-up.

A. Science :

Let us first try to categorise the broad aspects of the impact of science, which is knowledge of the universe or of the world and man, and its perennially continuing development in human life :

(1) Specialisation :

Continued development of *science*, in its hunt for knowledge of the universe in all its parts and facets, leads to the continuing and increasing need for *specialisation* of science into its several branches and sub-branches and their further and further specialised micro-branches or mini-branches, which will necessitate the pre-occupation of increasing intelligent personnel with them and its distribution among them.

(2) Inter-disciplinary Studies : This specialisation of the *sciences* naturally leads to a continuing need for the *inter-disciplinary synthetic studies*, which are highly necessary for the development of a synoptic world-view, which alone can be the ultimate basis for guidance in human life on the highest level; and in this context, it may be realized that such synthetic studies (for the development of a synoptic world-view), which must have for their basis the multi-specialised sciences, will also tend to become more and more complicated and also further specialised in their nature and get confined only to the topmost intellectuals in science.

(3) Suitable Choice of Scientific Studies :

It is obvious that proper care will have to be taken by individuals in their taking to science or scientific studies, so as to suit their equipments and dispositions and to enable them to serve specialised or synthetic scientific studies.

B. Technology : Coming to Technology (application of scientific knowledge for securing easy and expeditious control over nature, and its use for *practical* ends in life), the following may be said to be, broadly, the concrete effects of it in the daily routine of the life of man :

(1) More and More Leisure :

(**a**) Easy technological control over nature saves for man a good deal of his energy in making use of natural resources (e.g. water and electricity, and oil and gas) and their services for his practical ends; and this creates more and more leisure in his life, which creates the need for the circumspect planning of the proper use of those easily avilable resources and services and of the leisure made available by them.—Mere vacuous leisure, without any occupant for it, has a tendency to develop abnormalities and even vices, which are very harmful to the health and harmony in man's personal and social life; and it may, therefore, be desirable to fill in such leisure with enjoyable and healthy artistic—cultural activities with moral orientations towards that life. If necessary in this context, even moderation in the use of technical products and services may also have to be considered.

(**b**) Further, leisure (which is in essence the time saved by the use of technological aids) has also become further available, on a lower level, by (1) the use of the *productive instruments* (e.g. machinery in the mills) as substitutes for *manual* labour, as also, on a higher level, by (2) the use of the highly sophisticated *calculating instruments* (computers) as substitutes for higher *intellectual* labour.—Large scale use of both these types of instruments creates problems respectively corresponding to them, such as (1) the *unemployment* among working labour and its harmful social and political impacts, or (2) the *miscarriages*, by way of miscalculations, consequent even on the slighest inattention or distraction in their use on the part of the users of the calculating instruments (computers) and their grave social consequences (as was the case in respect of the grave situation recently created in Maharashtra by the use of computers in the preparation of the results of the S.S.C. Examination).—It is very difficult for students of philosophy to suggest adequate or concrete solutions for these problems : but in any case, the only appeal that can be made in this behalf to the social, economic and political leaders is that they should not lose sight, in their efforts to work out their solutions in this context, of the ultimate goals, in human life, of social adjustment and harmony to which their solutions may as far as possible conduce.—It may only be suggested that (1) there may be some kind of deliberate and circumspect planning of the scope and limits of the development and use of the productive instruments so as to avoid unemployment or at least to visualise and keep ready suitable remedies for it, if it does come about, and (2) some kind of check-up-and-re-check-up techniques may be evolved and used in respect of calculating instruments to guard against their miscarriages and their grave consequences.

(2) Versatility of Alternative Time-Occupants and Usable Materials and Energies :

(a) Time-Occupants :

Technology also offers synchronous, versatile and aternative variants of time-occupants (e.g. Radio, Television, Cinema-shows and Talkies, etc.) ; and this creates mental pulls in different directions and the consequent need for proper selective preferences among them with a view to utilise them towards the circumspectly chosen goals in personal and social life.

(b) Usable Materials and Energies :

Technological services also make available more and more sophisticated variants of materials and energies for use (e.g. various variants of technologically produced food, cloth, etc., or atomic and other forms of energy and power) ; and this, in its turn, indicates the need for proper selectivity *re* these variants to suit the considerations of health and economy, adjustment and peace in personal and social life.—Both these problems may also have to be considered from the point of view of the conditions and the goals in man's personal and social life, and with a view to ascertain the need, if and as necessary, to observe certain desirable limits of self-control and moderation in the use of those variants in one's life. [India's declared national outlook in the policy of exploring, by her recent experimental atomic explosion, the nature and availability of atomic-nuclear energy or power with a view to utilising it *only* for peaceful national and international purposes (which fall under the category of 'moral values' in the present context) and *not* at all for any anti-human and destructive purposes (under the 'anti-value' category) are an indication of India's consideration and regard for and commitment to the 'moral values' in the modern technological age.]

(3) Utilisation of Unuseful Materials :

Technological advances also lead to suggestions *re* the possible utilisation of materials not originally useful as they are in nature, which situation also needs consideration for finding out and controlling suitable ways of the proper utilisation of them, if any, and if and as necessary, for desirable ends (e.g. the utilisation of moss or other herbs, not directly useful, but usable after technical processing of them).

(4) Utilisation of Harmful Materials :

(*a*) Some natural objects (e.g. some poisonous plants and gases), and (*b*) some of the products in the natural life of animals and men (faecal excreta or dung), as also (*c*) some types of the scrap or refuse materials discarded by men (e.g. rusted motor or machinery parts) are not only not useful by themselves, but also cause deterioration and poisonous pollution of the surrounding physical environment and atmosphere of life, and also are actually harmful, if not properly disposed of or usefully channelled.—These categories of harmful objects or products or materials really constitute a challenge to human technological potentials or research abilities, which have to be directed towards the development of alternative technologies or counter-technologies to be evolved with a view to usefully utilising them for the ultimate good of the human beings, as has already begun being done. (E.g. consider the modern techniques of the 'gober gas or bio-gas plants', or the 'compost fertilisers', which are making good use of the human or animal dung or faecal excreta for obtaining heat and light, or good agricultural manures.)

(5) Incidence of Accidents :

It may also be noted that, though technology is purposive *re* its ends, it is purely and completely *mechanical* in its actual operation: and since man's life and behaviour in general are not wholly or always mechanical, the technical instruments or equipments constructed by man are not always free from faults; and, even if they are free from faults, man also cannot always ensure himself against his own inattention or distraction.—This entails the possibility of the incidence of accidents, which are harmful and sometimes even fatal. (E.g. accidents *re* the natural energies in the air and electricity, in air-travels or in the operation of the electrical machineries or gadgets.) Avoidance of these accidents will probably be somewhat of a continuing problem, though 'fortunately technology is showing signs of being able to evolve insurance ' techniques to meet them without any harm to life.

(6) Industrial Urbanisation :

Technology usually and naturally operates, on larger scales, in the city areas, which, as a consequence, become more and more industrialised ; and this causes unduly increasing *urbanisation* of life, which creates its own multifarious problems *re* the life in these areas. (E.g. compare the conditions of life created in cities like Bombay, Calcutta and now even Poona.) These problems relate to housing, health, employment, etc.; and there are evident signs that they have now begun to be met with on the basis of the new national policies which are developing, which again are bound to be based on the use of technological aids towards the maintenance of the health and harmony of life in those areas.—Proper areawise planning and distribution of the industrialised communities is also fortunately being resorted to in our national policies in this behalf, which are expected to curb the continuing inflows of crowds into the cities from the suburban and rural areas, and to prevent undue and undesirable industrial concentration and density in a few given city areas.

(7) Collectivisation of Aids :

Another noticeable phenomenon in the technologically oriented human life is the collectivisation of life's essential aids, such as the supply of water (by the constructions of water dams and supply machinery) or light (by the construction of electric powerhouses and supply machinery), the old provision for which by way of wells and wick-lamps has now been almost pushed back into history. This development involves the large-scale impacts, on wide areas, of even small accidents or miscarriages in the operation of the technical machinery. Technology is of course trying to ensure against these impacts also; but the problem appears bound to be a continuing one, with no permanent solution for it.

(8) Mechanisation of Life Routine :

Yet another phenomenon in the technologically oriented human life is the increasing *mechanisation* of the daily time-table of human life in the technologically governed areas of human habitation. E.g. Bombay, where individuals are perpetually overshadowed with the mechanical need to catch, at appointed times, their trains, trams or buses, which they cannot afford to miss, and which they have to try their best to catch in the midst of the queues or crowds.—Perhaps mechanisation of the daily routine may percolate, at least to some extent, to the psychological level of habit-formation, which may also reduce the strain of that mechanical routine and help towards adjustment and ease in life.

(9) Elimination of Personal-Social Contacts :

Yet another, yet a very important, phenomenon in the technologically shadowed and crowded life in the cities is the *increasing elimination of personal-social contacts* in that life. Men, especially the middle and lower class men in the chawls, and also those in the multi-storeyed sky-scrapers, live in their residences, which are like bee-hives or ant-hills indeed, where they have minimum contacts or mutual participation even with their neighbours, and such personal-social contacts of theirs, whatever they are, are only occasional and strewn far and wide among persons living at long distances, and are therefore not pulsating or thrilling, lively or active enough to give them a sense of continuing and intimate social comradeship.—This is a very important development, which has uncomfortable effects on the routine life of men, depriving them, as it does, of the very desirable and comfortable consciousness of having readily available and desirable comradeship around to stand by them as needed.—The only remedy to meet this situation is to curb the over-urbanisation of life in the cities and to prefer the development of decent-sized towns to crowded cities.

Concluding Remarks :

In the preceding Section, I have tried to present my own, a layman's, broad observations and orientations on the typical impacts of Science and Technology in the different contexts of the personal and social life of man in our contemporary life's set-up and the problems emerging from them ; and I have also given my indications *re* the broad ways in which they can and may be confronted with.—If we take due cognizance of the fact that Science and Technology have been conterminous with human life itself from its very beginning, it is clear that they will continue vitally to figure in that life perpetually, and that there is *no* going back on them. Accordingly, all we can do is to try suitably to plan out their operation in and impact on life so as to suit and help the proper synthesis and realisation of the fundamental concrete goals or ends or values in the bodily and spiritual life of man, viz. adjustment and harmony between man and his environment, physical, mental and social, and the attainment of satisfaction and happiness in his life as a whole. And for this, it would be necessary and desirable to be vigilantly taking continuing and circumspect cognisance of the effects and impacts of science and technology on human life, and also to be making continuing and circumspect attempt to meet and adjust with these effects and impacts for the maintenance of the health and harmony, satisfaction and happiness in human life, individual and social, as the concrete values in the routine life of man. This is the general upshot of my broad orientation and outlook in this present context of the subject of this Session—' Science, Technology and Value '. I have done.

Post-Script : This is just a *Post*-Script, which was originally not a part of the above Address, and is meant to convey a suggestion to the Philosophical Community, especially in India.-When I was looking up relevant references and reflecting on the subject of the Address, I came to have a feeling that ' Philosophy of Technology ' may well be considered as a *specialised* sub-branch of ' Social Philosophy ', already a recognised Branch of Philosophy', even as ' Philosophy of Economics ' has now begun to be treated as its another specialised sub-branch. And, in this context, just as for the purposes of their work on the ' Philosophy of Economics ', Philosophers need to cultivate some concrete acquaintance with the fundamentals of the Science of Economics, even so, for purposes of their work on 'Philosophy of Technology', the Philosophical Community, especially ourselves in India, needs to cultivate some concrete, though general, acquaintance (which we do not adeqately have at present) with the fundamentals of Technology in its various spheres and facets. ' Philosophy of Technology ' needs to be treated as an important field for specialised philosphical research. 15-2-1976.)

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(Maharashtra-India)

D. D. Vadekar

INDIAN PHILOSOPHICAL CONGRESS GOLDEN JUBILEE SESSION : WORLD PHILOSOPHY CONFERENCE

December 28, 1975 to January 3, 1976

DELHI

A Brief Report

The Golden Jubilee Session of the Indian Philosophical Congress was held on the Campus of the Delhi University under the auspices of the Delhi University on the completion of 50 years of the Congress, from 28th December, 1975 to 3rd January, 1976. This was the Joint 49th and 50th Session of the Congress, and was also held as " World Philosophy Conference ". The Session was attended by more than 525 delegates who had assembled in Delhi not only from all the parts of India, but as many as 75 delegates had come from foreign countries also.

Being the Golden Jubilee Session, it lasted for a week. The Plenary Sessions were held in the morning from 9.00 a.m. to 1.00 p.m., and afternoon Sessions were devoted to Sectional Meetings. There were six Plenary Sessions, one being held on each day, and sectional meetings for the various sections were held every afternoon to present and discuss the papers of which Abstracts were already published by the Congress in a book entitled, " Abstracts ".

At the inaugural function the delegates were welcomed by Prof. R. C. Mehrotra, the Vice-Chancellor of the Delhi University, and the Inaugural Address was delivered by Prof. Sava Ganovski from Bulgaria, the Chairman of the Federation of the International Philosophical Societies. Dr. R. C. Pandeya, the General Secretary, Indian Philosophical Congress, welcomed the Delegates on behalf of the Congress and presented a Report of the activities of the Congress. Dr. A. G. Javadekar, the Chairman, Indian Philosophical Congress, delivered his address on ' Philosophy of Ecology '. The Suvenir, brought out on the occasion, was dedicated to the meomory of Dr. S. Radhakrishnan by Dr. D. S. Kothari.

Each one of the six Plenary Sessions was presided over by an eminent Indian Philosopher, who had the honour of being a General President of the Indian Philosophical Congress in the past.

The subjects for the Plenary Sessions were : Knowledge and Truth, Science, Technology and Value, Vidyā and Avidyā, Language, Culture and Man, Commitment and Action, and Theory and Praxis. They were presided over by distinguished Indian Philosophers such as Dr. T. R. V. Murti, Prof. D. D. Vadekar, Dr. T. M. P. Mahadevan, Dr. S. Vahiuddin, Dr. P. T. Raju and Dr. A. K. Sarkar respectively. Dr. Sarkar presided in place of Dr. B. L. Atreya who could not attend the session on account of his ill health.

In each of the Plenary Sessions there were 4 to 6 main speakers, and at least two participants were from abroad. The foreign delegates were invited to take active part in all the deliberations by presenting their papers, and most of them presented their papers and made the deliberations lively and fruitful. In addition to the six Plenary sessions there were also two Panel Discussions on (1) Buddhism and Vedānta and (2) Myths and Symbols, for which main speakers were invited to present their papers.

Another feature of the Session was Sectional meetings held every day in the afternoon from 2.30 p.m. to 5.30 p.m. There were six sections and each one was presided over by members of the Congress. The Sections were as under : Morality and Culture; Religion, Science and Man; Language, Thought and Reality; Logic and Experience; Education and Human Development; Aesthetic Theory and Art, and the sectional meetings were presided over by Dr. N. K. Devaraja, Dr. Santosh Sengupta, Dr. K. K. Banerjee, Prof. D. Y. Deshpande, Dr. K. Sacchidananda Murty and Dr. Nagendra respectively. Almost all the members of the Congress who had contributed their papers were given opportunity to present their papers in these sectional meetings. One morning-session was specially devoted to the celebration of the 2500th anniversary of Lord Mahāvīra, and papers of Acharya Tulsi and Upadhyaya Muni Shri Vidyanandaji were presented on this occasion. Similarly during the same session homage was paid to the sacred memory of Shri Guru Teg Bahadur and papers on Sikh Philosophy and Religion were presented.

This year Shrimant Pratap Seth Vedānta Lecture was delivered by Dr. Karan Singh, the Union Minister of Health and Family Planning. He delivered a very fine and eloquent address on the role of Vedānta in modern times.

The Buddha Jayanti Lecture was delivered this year by Dr. G. C. Pande, the Vice-Chancellor, Rajasthan University, on the Aesthetic Theory in Buddhism. A special lecture was delivered by Dr. Andre Marrier (Bern.).

The session was concluded with a brilliant Valedictory address by Prof. S. Nurul Hasan, the Union Mimister of Education on 3-1-1976. Prof. Hasan discussed the vital relationship between the Teachers, Philosophers and the modern nation-building activities, and he fervently appealed to the Delegates of the Congress to accept voluntarily their responsibility and render their invaluable help in the reconstruction of the country.

A cultural programme of Dance and Music was arranged on the last day in which Smt. Rani Karana gave an exquisite performance of Kathak Dances and Padmashri Ustad Abdul Halim Jaffer Khan, a world famous sitarist, gave his performance on Sitar which was of a rare and unique quality.

The following delegates from abroad presented papers in the Plenary Sessions : Sava Ganovski (Bulgaria), P. F. Strawson (U.K.); Ermolenko D. V., (U. S. S. R.); Donald H. Bishop (U.S.A.); W. Steinkraus (U.S.A.); A. Kosing (Berlin); Karl Potter (U.S.A.); Eliot Deutsch (U.S.A.); H. D. Lewis (U.K.); I. M. Copi (U.S.A.); Archie J. Bahm (U.S.A.); Cannabrava (Brazil); R. Panikkar (U.S.A.). Many foreign delegates, besides these, presented their papers at the sectional meetings.

The Indian Philosophical Congress has brought out this year, specially on the occasion of the Golden Jubilee, the following publications : (1) Knowledge, Culture and Value, Vol. I—It contains papers presented in the Plenary Sessions, Panel Discussions and Special Lectures. (2) Knowledge, Culture and Value, Vol. II contains 41 papers of the members presented in the Sectional meetings. Both the volumes are edited by Dr. R. C. Pandeya and Dr. S. R. Bhatt jointly, and are published by Motilal Banarsidas. (3) The Indian Philosophical Congress—A Short

History (1925–75) is prepared by Dr. Basant Kumar Lal of the Patna University. It gives an account of the activities and developments of the Indian Philosophical Congress through the last 50 years including its annual sessions. (4) A Directory of Indian Philosophers—compiled by Dr. G. N. Joshi of Fergusson College, Poona. It contains biodata of more than 1000 living teachers of Philosophy in Universities and Colleges in India. Such a Directory has been prepared in this subject for the first-time in India. (5) Abstracts—It contains abstracts of 185 papers which were presented and discussed in the various sectional meetings. They were edited by Dr. K. K. Mittal of the University of Delhi. No. (3), (4) and (5) publications are published by the Department of Philosophy, University of Delhi.

G. N. Joshi

Poona

Joint Secretary,
Indian Philosophical Congress.

AUSTRALASIAN ASSOCIATION FOR LOGIC

At a conference of logicians that was sponsored by the Research School of Social Sciences, The Australian National University, and which was held in Canberra, Australia, from 22 to 24 August, 1975, it was decided to formally reconstitute the Australasian Association for Logic (A.A.L.), which had not met for several years. The meeting elected a new executive which will serve until the next general meeting of the A.A.L. in August, 1976. Mr. F. R. Routley of the Department of Philosophy, Research School of Social Sciences, The Australian National University, was elected President, and Mr. M. A. McRobbie of the Department of Philosophy, Research School of Social Sciences, The Australian National University, was elected Secretary.

The object of the A.A.L. is to further studies in logic, in particular in formal logic, history of logic, foundations of mathematics, philosophy of mathematics and philosophy of logic and the application of formal logic to problems in philosophy, in the social sciences and natural sciences, and in technology. In order to advance these aims, the A.A.L. will be holding an annual conference. The 1976 annual conference of the A.A.L. will be held at The Institute of Advanced Studies, The Australisn National University, Canberra, Australia, from Thursday 12 August 1976, until Saturday 14 August, 1976.

Membership of the A.A.L. is open to any person who is interested in study of logic, and the furtherance of its study. Any person who wishes to join the A.A.L. and thereby receive notices of the A.A.L.'s activities and conferences should contact the Secretary at the following address :

Mr. M. A. McRobbie,
Secretary,
Australasian Association for Logic,
Department of Philosophy,
Research School of Social Science,
The Australian National University,
CANBERRA, A.C.T. 2600, Australia.

Logicians and other interested persons from outside Australia or New Zealand who will be in Australia or New Zealand at the same time as the A.A.L.'s annual conference is being held and who wish to attend or participate in the conference should contact the Secretary at the above address.

We wish to record our profound sorrow at the sudden passing away of Dr. Prem Nath, Professor and Head of the Department of Philosophy, Punjab University, Chandigarh [illegible] last month. Dr. Prem Nath was a highly sensitive and serious scholar in the field of social and educational philosophy. He has guided generations of students towards a deeper understanding of Philosophical issue of culture and his work also has been devoted mainly towards this end. With his passing away, we have lost a sensitive and deeply serious thinker. The Indian Philosophical Quarterly sadly records his loss to the world of Philosophical studies.

EDITOR

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Sd/–**Surendra Sheodas Barlingay**

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The Indian Philosophical Quarterly is happy to announce the commencement from this issue onwards of a student supplement. This supplement is devoted to the publication of articles, book reviews and notes from bonafide students of philosophy. Such contributions may not exceed 10 double-spaced, type written pages on any philosophical problem or theory and they may be sent to **" The Editor, Indian Philosophical Quarterly : Students' Supplement "**, along with a bonafide certificate from the department or institute.

Editors

VOLITION AND THE LAW OF CAUSALITY

The most obvious fact about man is that he is both part of nature—and uniquely different from all other things, animate and inanimate.

Like the rest of nature, man is subject to the laws of nature. But unlike any other thing, he is a creator; he obeys nature so that he may command her.

What makes this possible is the question that must be answered before any science of man can hope to progress to the heights of the physical sciences.

The question, specifically, is this : what principles of action is operative in man ? Is human action merely a reaction to stimuli, to all the antecedent forces acting on the agent, or is man a self-mover, the first cause of his own actions ? And if he is such a first cause, where exactly does the freedom to cause his action lie, and what exactly does it consist in ?

In philosophical discussions of the problem, there are, basically, only two positions on the issue of free will : the determinist position, which claims that man is subject to the law that every event has a cause, and that, therefore, since human actions are events, it follows that they are caused and man has no free will; and the libertarian position which claims that man is exempt from the law of causality—because he has free will, as seen by the fact that he holds himself responsible for his actions.

Both positions share a common assumption, namely, that causality and free will are incompatible. They are—if causality is a relationship between events. Then no appeal to desires or motives or volitions as mental events can save free will : if mental events are causes of actions, then mental events are themselves the effects of certain other events. This means that although a man is free to do what he wills, he is not free to will or not to will : his choice " issues in accordance with law from some antecedent. "[1]

According to libertarianism, a free act is that which could have been different under exactly the same conditions. It is rightly pointed out that such a requirement is self-contradictory, since

" same conditions " includes the choice to do what was done. It is obvious that if the choice to do A had not obtained, the action A would not have followed, and it makes no sense to demand that an action should be called free *only* if it follows equally from the choice to either do it or not do it. Further, the libertarian negates the meaning of responsibility by propounding such a thesis : if a person's choice has nothing to do with his action, he can hardly be held responsible for it.

On the other hand, neither can he be held responsible for his actions if his choice is determined by forces outside his control. As Aquinas pointed out, to act in such a way that one cannot avoid the act is neither praiseworthy nor blameworthy. However, the fact that men are held responsible for their actions does not *prove* that man is free, for it is precisely this notion of freedom that has to be validated if morality is to be " saved ". The argument against determinism is two fold : (1) The determinist argues that the sense of freedom we all experience in making decisions is deceptive, because introspection does not give us the cause of this feeling. But if this is so, then the onus of proof is on the determinist to show that the feeling is a delusion, and his thesis is true. It is unwarranted to argue from the fact that all events are caused to the thesis that human choices are caused, for this is precisely the issue at stake. It is unwarranted also to argue from the fact that in dreams or in action done under post-hypnotic suggestion the agent experiences the same sense of freedom, to the thesis that, therefore, this feeling is deceptive in any circumstance. For the determinist is suggesting that we know that the experience of autonomy in the first instance is deceptive because we know that actions done under post-hypnotic suggestion are not free. But *this* means that the determinist is able to make a distinction between free and compelled action even as he is denying the possibility of free action. (2) Even more seriously, determinism makes the fact of human fallibility inexplicable. If man were determined by his environment or heredity (which means, ultimately, his physical structure), his thoughts and reactions would be reactions to physical stimuli. But of such reactions it makes no sense to say that they are in accord with facts or mistaken : they just are. Yet, man has true ideas and man has false ideas; he is able to detect his mistakes and correct them. His corrections cannot be responses to physical events because this would imply that physical events are contradictory—sometimes giving A stimuli, at other times giving non–A stimuli. Moreover, if determinism is true, then the deterministic thesis is itself merely a reaction (in the minds of some people) to certain events. As such, it cannot claim to be knowledge : knowledge is identification of the facts of reality, and a man can know that his belief constitutes knowledge only by testing it against reality.

One must conclude, then, that neither determinism nor libertarianism are defensible. The first is arbitrary in negating the difference between man and other things; thus making it impossible to explain his achievements. The second saves man's uniqueness only by making him into a freak of the universe, leaving him as inexplicable as the determinist's man. The reason for the impasse is the common supposition of the libertarian and the determinist that causality and free will are incompatible. And this supposition is the result of the fact that they both believe that causality exemplifies an event–event relationship. Hence neither is able to ask if man's *nature* is not such that he must be the agent of his own actions in the original sense of *agere :* initiator.

Richard Taylor's agency theory is an attempt to show that man is such an agent : the initiator or first cause of his actions.

According to Taylor, everyone "*knows* what causation is—simply because. .everyone thinks of *himself* as an efficient cause. . Everyone knows what it is to make something happen and to exercise such power as he has over his body and his environment; but no one can *say* what this is, other than to say, simply, that it is causation."[2]

Thus, everyone is aware that his actions are free when—and because—they are caused by *him*, but when nothing causes *him* to do them. A free act, then, is not "a random, causeless, fortuitous, and therefore inexplicable change."[3]

This thesis reconciles freedom with causality, but it can hardly be said to have proved its case. First of all, it undercuts its own appeal to the feeling of autonomy we all have in at least some of our actions by declaring that the notion of introspection is dispensable because "it is not even clear what introspection is."[4] This means that introspection is not our means of knowing that we have power over our own bodies and environment, and Taylor does not tell us what is. Secondly, Taylor fails to explicate the notion of agency, to explain *where* man's power over himself lies. It is unsatisfactory merely to say that man does have such power because a causal power must be capable of description, must be locatable, so to speak, if it is anything at all. Unless this is done, no scientific explanation of human action can be given, and no prediction can be made, because no psychological laws can be formulated.

Indeed, in the end Taylor admits that he has not validated free will, but proved merely that all the familiar arguments for determinism are false.[5]

The first full account and validation of the thesis that man is the first cause of his actions has been provided by Objectivism.

According to Objectivism, " The key to .. human nature .. is the fact that *man is a being of volitional consciousness*. Reason does not work automatically; thinking is not a mechanical process; the connections of logic are not made by instinct. The function of [man's] stomach, lungs, or heart is automatic; the function of [his] mind is not. In any hour and issue of [his] life, [man] is free to think or to evade that effort. But he is not free to escape from [his] nature, from the fact that *reason* is [his] means of survival—so that for .. a human being, the question ' to be or not to be ' is the question ' to think or not to think.' "[6]

That thinking has to be initiated by man, that it is not automatic, is obvious. Thinking is a process of conceptualization, and the essence of conceptualization is abstraction and integration. Man's brain integrates sensations into percepts automatically, but it does not integrate his percepts into concepts on its own: if it did, man would be infallible. Man not only has to *initiate* a process of thought, he also has " to sustain it and to bear responsibility for its results. . . . he has to discover how to validate his concepts, his conclusions, his knowledge; he has to discover the rules of thought, *the laws of logic*, to direct his thinking. "[7]

In psychological terms, the choice " to think or not " is the choice " to focus or not. "[8] Herein lies man's freedom. A person's antecedent values and interests are relevant to what he will think about in any given moment, but they do not *determine* what he will think, because his values and interests are themselves the result of the thinking or non-thinking he has done over a lifetime. His freedom consists in the fact that he is free to question his values and interests if they are inappropriate, i.e., self-destructive. For instance, when a man sees a beautiful car in a show window, it will depend on his antecedent values and premises whether his first thought is, "I must earn the money to buy this car"—or, "I wish I could drive this car"—or, "Can I steal this car without getting caught?" What he *is* free to do is to check himself in his train of thought and "think his way out of" his desires if they are inappropriate.

The choice to focus is the choice to be aware, and "Awareness is the starting point and precondition of goal-directed (value-directed) human action—not just another goal or value along the way, as it were."[9] Awareness is what makes any other value possible. To say that man is free to unfocus his mind is not to say that he can literally become unconscious, but merely that he can lower the level of his awareness when he knows (dimly or clearly) that he should not, or refuse to raise his awareness when he knows (dimly or clearly) that he should. The ability to focus, is, in effect, the ability "to say, of what is, that it is, and of what is not, that it is not;" to sustain one's focus is to retain the ability to test one's conclusions against reality, against that which is, so that one will not say "of what is, that it is not, and of what is not, that it is." To be in focus is to engage in a process of reasoning for the sake of acquiring knowledge—to be out of focus is to engage in a process of self-deception for the sake of evading knowledge.

Man is the only creature free to act as a self-destroyer, because man is the only living being whose survival is not "wired in" to his biological structure. Although the self-regulatory activities of other life-forms—the vegetative level of self-regulation in plants, and the conscious-behavioural level in animals—are present also in man, independently of his choice, man has the power to regulate the conceptual actions of his consciousness *by his own choice.* On the first two levels, the organism's life is the implicit standard or goal of the self-regulating activity, about which the organism (including man) has no choice. Thus, on the plane of sensory awareness man cannot help but get the knowledge which his senses provide him. On this level, "*awareness* is the controlling and regulating goal of the integrative process—by nature's programming "[10]. But on the conceptual level awareness is the controlling goal of mental activity in the sense of being *necessary* for man's proper survival, but *without* being implanted in him by nature. Man has only the *capacity* to be aware, to focus : nature does not guarantee that he will use his capacity, that he will remain actively conscious. It is up to man to choose awareness as his goal in any given waking moment of his life. This choice is causally irreducible : " it is the highest regulator in the mental system.. in relation to [which], all other choices and decisions are *sub*-regulators. "[11]

To ask " *why* should man focus ? " is to ask " why should man seek to maintain cognitive contact with reality ? " And the only answer is " He should because he *must*—if he wises to remain alive in the manner proper to a human being. "[12] Man is free to adopt a policy of evasion, of wilful disregard of unpleasant facts, but he is not free to evade the consequences.

This is where the issue of psychological explanation and prediction of human action becomes operative. When one recognizes that one's values—" that which one acts to gain and/or keep "[13]—are the result of one's primary choice to think or not in every hour and issue of one's life; that emotions are automatic responses to what one considers as valuable or threatening—one can predict what emotions a man will experience, given his values, in certain situations. Further, when one discovers that a man's basic psycho-epistemological policies—i.e. his characteristic method of using his mind— become cognitive and emotional habits that function as inclining—though not *necessitating*—factors in his grasp and evaluation of a situation, and his consequent action, one can predict that a characteristically evasive person confronted with the choice, for instance, between taking the only action he considers right although it will cost him his job—and appeasing his boss to keep the job when he knows that his boss's proposal is wrong—will do the latter, *unless he chooses to question his premise* that the morally wrong action is justified because " after all, one must live ". Again, when one has grasped that what a person responds to in another is his own values—one can predict that a person of profound self-esteem will be attracted only to people who value themselves, to people who hold the independent judgments of their own minds above " majority opinion "; and that, conversely, a person whose main purpose in life is to " get along " with people will never be the first to challenge a fashionable doctrine he considers to be wrong.

In any prediction of human action, however, since man is free to question the values he acts on, one must add the clause, " All other things being equal, " or —"If he chooses to focus..," or " If he chooses not to focus (on the relevant facts). " But prediction in the physical sciences also is hypothetical. The only difference is that in the latter the hypothetical condition refers to the environment of the entity whose action is to be predicted, whereas in the case of human action the condition is set by the actor himself—and the reason for the difference is that motion of inanimate objects presupposes an external mover, whereas man is the mover of his own actions.

The location of man's free will in this single psycho-epistemological act of choosing to focus or not to focus solves the age-old problem : How can man do evil ? (now become the problem : How can man do good ?) Man can do evil because he has the capacity to pretend that what is, is not, on the implicit premise that there are no unpleasant facts which thinking will not negate—in other words, that existence is malleable to human whim, and human nature can be conned indefinitely.

The fact of anxiety attacks, nervous breakdowns, psychosomatic diseases and other more serious psychological disorders gives the lie to this premise—and proves that the law of causality cannot be evaded : " what an entity can do is determined by its nature—and what an entity does with its consciousness determines the effects on its consciousness."

Only a study of human capacities and needs—specifically, of the implications of the fact that man is a being of volitional consciousness, all of whose actions follow, ultimately, from a choice between the only two fundamental alternatives open to him—can resurrect the sciences of psychology and ethics. And only such a resurrection can provide a basis for the " social " sciences which must explain what kind of political system can best allow man to function as man (as a being endowed by nature with the capacity and necessity to make his own choices, i.e., to think), what kind of economic system (resulting from what kind of political system) can best allow man to function as a productive being (productivity being, to use Ayn Rand's words, the application of reason to the problem of survival), what kind of social change is conducive to man's interests and what kind is not—and why some societies "change" in the direction of freedom and others in the direction of totalitarianism.

Like any other science, the social sciences must be capable of *explaining* and *predicting* their subject matter : social phenomena. Neither is possible on the premise that the actions of the units that constitute society (human beings) are exempt from the law of causality, because their nature is even less determinable than the nature of inanimate objects. If the social sciences are to be sciences of man they have to say not only *why* that which happens, happens; and predict *what* will happen in the future as a result of present policies and actions; but also what man *should* make happen and why, regardless of a society's climate, clothing or food-habits. In other words, the social sciences have to set normative guidelines—guidelines which direct all human activity, including the inquiry into physical phenomena, by setting the goal of such activity : human enjoyment of life. It is in this sense that one may affirm with Aristotle that without knowledge of "living" and "knowing," change in general is not really understood at all: a knowledge of living and knowing is necessary for providing the motor and destination of the vehicle that is physical science and technology.

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NOTES

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3. Taylor, pp. 140–41.

4. *Ibid.*, p. 7.

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10. Branden, " The Objectivist Theory of Volition, " *The Objectivist* Vol. 5, No. 1, Jan. 1966, pp. 8–10.

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12. For a discussion of this issue see *The Virtue of Selfishness*, pp. 22–26.

13. *Ibid.*, p. 25.

STRAWSON'S CONCEPT OF PERSON

While carrying the project of his so-called " descriptive metaphysics ", Professor Strawson, in his book *Individuals*, exemplifies that material bodies and persons are the two " basic particulars " ontologically presupposed in the conceptual structure within which ordinary language operates. During the last decade, and even today, Strawson's concept of person has been drawing persistent attention and controversy of contemporary thinkers in the analytic tradition. This is because of the concept's inherent significance in the philosophy of mind and its relation with the perennial mind-body problem, along with the ingenious and perceptive argumentation displayed by Strawson's analytic acumen.

How does Strawson confront the problem of the concept of a person ? His examination of the nature of basic particulars of the world is through what he calls, " referential identification " or demonstration of the objects which are fitted into spatio-temporal frame-work. And the status of ' basicness ' is awarded on the basis of what he again terms ' identification-independence '[1]. In accordance with these criteria, Strawson, however, concludes that material bodies are the fundamental type of basic particulars. Material bodies can be identified and re-identified in a spatio-temporal context and can be referred to demonstratively. Now, what about ' private experiences ' which have been traditionally suggested to be the ideal paradigms for basic particulars ? On the basis of his said criteria, Strawson insists that private experiences (' private particular ' in Strawson's words) do not qualify for the status of basic particulars. But, then, how to account for the identification of private particulars or states of consciousness which poses special difficulty to the philsosophers ? States of consciousness cannot be ' individuated ' in the way material objects are. But we do ascribe them to ourselves and others. An analysis of the person-language reveals to Strawson two vital questions : " Why are one's states of consciousness ascribed to anything at all ?.... Why are they ascribed to the very same thing as certain corporeal characteristics, a certain physical situation, etc. ? "[2] Strawson thinks the answers to these two questions are dependent on each other, and only an explanation of these problems can give us the knowledge of the *actual* use of concept of person.

In this attempt to provide answers to such questions, Strawson is led to a considerstion of two polar views : that of the Cartesian dualism and that of the No-ownership or no-subject doctrine. The Cartesian concept of person, as characterized by Strawson, presents a radical dualism of two substances—a private ego (spiritual substance) and a body (material substance). According to such a view, properties or states attributed to one substance cannot be legitimately attributed to the other. We ascribe predicates of one type to an ego or mind and ascribe other predicates to a body or extended substance. Strawson argues this theory to be logically incoherent by trying to show that the language in which we talk about ourselves and other persons presupposes a concept of person which rules out the possibility of coherently stating the dualistic position. If states of consciousness belong not to a unique person but to a private ego, there is no possible way of ascribing them to anybody else but ourselves. So there is no way of identifying a certain state of consciousness as so-and-so's experience. Thus the dilemma which Strawson poses for the dualist is (*a*) because I do not observe any other ego, I can only ascribe states of consciousness to myself; (*b*) but If I can ascribe states of consciousness *only* to myself, then I cannot ascribe them *at all* because there is no possible contrast of 'my.... ' with 'other.... '. The only way I could possibly think of myself as having states of consciousness is if I thought that others had them too. Strawson pursues the following logical steps : A necessary condition of attributing experiences to oneself is that experiences should be attributable to subjects of experiences other than oneself; a necessary condition of attributing experiences to others is that they should be identifiable. But other subjects of experiences could not be identified if they are Cartesian egos or minds. The incoherence of Cartesian dualism, thus, consists in the fact that whereas this theory is supposed to provide, among other things, an explanation of how self-attribution of experience is possible, its basic thesis that a subject of experience is a Cartesian ego leads to the stultifying consequence that self-attribution of experience is impossible.

In the no-ownership theory, on the other hand, experiences do not belong to, and are not 'owned' by anything at all except in the "....sense of being causally dependent upon the state of a particular body".[3] This theory thus attempts to explain away the ego or subject of experience as a metaphysical myth arising from the fact that all my experiences are (contingently) uniquely related to a single body. But this is, Strawson argues, incoherent because it can give no satisfactory meaning to the phrase "all my experiences" used in explaining away the ego. The use of 'my' in the phrase cannot be understood without the help of that very concept of ownership which the no-ownership theorist professes to abandon. Underlying this objection, according to Strawson, is the fact that an experience can be identified only as *somebody's* experience—it owes its identity to the logical impossibility of its being anyone else's experience. The no-ownership theory leaves us with no way of identifiying particular experience, no way of referring to them. It is a distorted view of the conceptual scheme that we have in use, and that it is incoherent or in a manner self-contradictory.

Strawson concludes that both theories of the self are dualistic in nature. The position of the Cartesians leads, as has been said, to a dualism of two substances, or subjects, the position of no-ownership theorist leads to a dualism, a little paradoxically, of a subject (the body) and a non-subject. Both views, according to Strawson, are wrong in holding that 'I' has got two different uses, each carrying different denotations. Strawson's main objection to both these views is that they are unable to answer the question why states of consciousness are ascribed to anything at all; the reason, he states, is their assumption of mind-body dichotomy. Strawson wants to steer between these two extreme positions. In doing so, he attempts to illustrate difficulties involved in ascribing states of consciousness or private experiences to something completely different from that to which corporeal characteristics are ordinarily ascribed. If we do so—that is—if we ascribe states of experiences to a subject S, and the corporeal characteristics to a body B, it is, Strawson claims, difficult to understand why states of consciousness or experiences should be attributed to anything at all.

Strawson asserts that the possibility of ascribing states of consciousness to others is a *necessary precondition* for the possibility of ascribing such states to ourselves. This position can be reduced to the notion that the ascriptive phrases we use in reference to ourselves are used in the same sense when they are used in reference to another. In other words, Strawson is appealing to the public nature of ordinary language. Our conceptual scheme comprises such a language which consists of intersubjective communication of shared or common *meanings*.

Now, the only way out of such difficulties, Strawson concludes, is to take the concept of person as 'logically primitive', as a *primitive unanalysable concept*. An examination of person-language, he adds, reveals that the presupposed concept of person is 'primitive' or foundational, in the sense that it is not analysable into two sub-concepts : a mind and a body. This 'logically primitive' concept of a person is a single unique particular which entails the description of an entity to which predicates ascribing states of consciousness (P–predicates) and predicates ascribing corporal characteristics (M–predicates) are equally applicable. If it is sensible to say of a person that he is sad (i.e., ascription of a P–predicate), it is no less sensible to say of that very same person that he weighs two–hundred pounds (i.e., ascription of a M-predicate). Persons, then, are distinct from material bodies, but they are not therefore immaterial bodies or incorporeal non-bodies. A person *possesses* states of consciousness as well as physical attributes and is not merely to be identified with one or the other. Nor does he think it to be a combination of the two. It is, in a sense, a "thing–itself" which "possesses" both the body and the experiences. That is, a whole person is something in addition to his body and his experiences, something to which his body and experiences belong. For Strawson the concept of person is, thus, *a priori*.

Strawson dismisses the notion of a pure or transcendental ego, at least, as a primary concept in terms of which the concept of person can be explained or analysed. He admits that the concept of a pure individual consciousness may have a "..logically secondary existence"[4] which itself is to be explained, analysed, in terms of the concept of a person. He thinks Kant's transcendental ego or the notion of "'I think' which accompanies all my perceptions" to be vague and indefinite.

In his explication of the nature of P–predicates, Strawson asserts that we ascribe such predicates to others on the basis of observed behaviour criteria. Their modes of behaviour, he states, provides us with " .. criteria of a logically adequate kind for the ascription of the P–predicate ".[5] But in the case of self-ascription of experiences, observation of such behaviour criteria is not a condition for one can have direct access to one's 'inner' experience. Apparently, there is an asymmetry between the two kinds of ascription, but, according to Strawson, that does not mean that there is difference of *meanings* in the respective cases. Here Strawson emphasizes the unique logical character of P–predicates. In his own words, " .. it is essential to the character of these predicates that they have both first–and third-person ascriptive uses, that they are both self-ascribable otherwise than on the basis of observation of the behaviour of the subject of them, and other-ascribable on the basis of behaviour-criteria. To learn their use is to learn both aspects of their use."[6] Thus, in the two sentences 'I am depressed' and 'he is depressed', the word "depression" refers to one and the same state of consciousness. My depression is something, one and the same thing, which is felt, but not observed, by me, and observed, but not felt, by others. This is a typical ordinary language philosophy's thesis that the meaning of a word consists in its use. What follows, however, is that there is no logical gap between self-ascriptive use of predicates, e.g. depression, and other-ascriptive use of them. "To refuse to accept this", Strawson asserts, "is to refuse to accept the *structure* of the language in which we talk about depression".[7] In this connexion Strawson tries to refute scepticism. He argues that the sceptic fails to understand that one cannot make sense of the notion of 'my experience' unless one can also, in principle, apply the notion of 'his experience', 'your experience' etc. There is no need for the argument from analogy to know the existence of other persons or that others have consciousness, because the ascription of predicates involving consciousness to others is a pre-condition of applying them to oneself. The Sceptic, in his attempt to deny that we have any right to ascribe P–predicates to other persons, simultaneously accepts and does not accept that language. He pretends, Strawson maintains, to point to a logical gap between my depression and the depression you observe. But if his scepticism were to be taken seriously, even the concept of 'my depression', on which the sceptical argument rests, could not exist.

What is most debatable in this context is Strawson's notion of *logically adequate criteria.* If the outward expression or behaviour is a criterion for the existence of inner state or experience, then we are entitled to ask what sort of criterion it is and what can be meant by the claim that it is logically adequate. Strawson never seems to be seriously preoccupied with answering this question, except by appealing to the example of the game of cards.[8] Just as one ascribes to a Queen of Hearts in the context of a game of cards, says Strawson, properties over and above the possession of its markings, similarly one ascribes to the predicates other related meanings, interconnexions and inter-links. To make it more clear, just as the card called ' Queen of Hearts ' gets its full meaning from the whole structure of the game, and not merely from the markings which constitute its logically adequate criteria for entitling so, likewise, the predicates involving consciousness which are applied to others get their full meaning from the structure of language, which is over and above the sense conveyed by the physical criteria or behaviours which constitute the logically adequate criteria for the other-ascription of such predicates. But A. J. Ayer[9] has shown that Strawson's analogy of logically adequate criteria between the case of a game and that of human experience is unjustifiable for, in the former case, it is conventionally imposed while in the latter it is not. In his (Ayer's) own words, " For the connection between a mental occurrence and its bodily expression is just not at par with that which is conventionally established between the appearance and function of a token in a game...there would be no contradiction in identifying a man's grimace as one which was characteristic of a man in pain, and yet denying that he felt any pain at all. The grimace and the pain are logically separable in a way that, given the appropriate conventions, the appearance and function of a token is not ".[10] According to Ayer's interpretation, Strawson fails (or is not prepared) to distinguish the conditions under which a word can be said to have meaning from the conditions of its empirically successful application. Until this problem is settled, the use theory of linguistic meaning professed by ordinary language philosophy, which Strawson also adopts in his analysis of the concept of person, does not seem to be satisfactosy. Hence Strawson's analysis here is not free from epistemological difficulties and sceptical onslaughts as well.

The ascription of P–predicates to subjects of experiences other than oneself is not free from uncertainty and hesitation. Since they are *exclusively inferential*, the P–predicates do not even approach *appodeictic certainty*. Even self-referential statements like 'I am in pain' may produce in some other's mind attitudes of belief, disbelief, suspicion and so on. In the ascription of P–predicates there is always the possibility of making errors in the interpretation of ostensible behaviour-criteria. There is at least no necessary relation between P–predicates ascribed to a person and the actual states of consciousness of that person. There is, thus, an unquestionable scepticism which is manifest in relation to inferences concerning the state of consciousness of others. In fact, the structure of ordinary language does exhibit instancial evidence of such behaviour. Under such circumstances it is not clearly understandable how Strawson could defend his notion of logically adequate criteria for the justification of his central thesis.

As stated before, the asymmetry between the criteria of self-attribution and other-attribution of P–predicates cannot be overcome in the way Strawson tries. It is intuitively obvious that there cannot be such a predicate for whose ascription both observed behaviour-criteria and unobserved experience or non-behavioural criteria are equally sufficient conditions, since the two conditions are in no way equivalent to each other, except in an incoherent conceptual scheme. The concept of person as expounded by Strawson seems to have its inherent logically incoherent character since the two independent criteria or sufficient conditions of self– and other-ascription of P–predicates on the basis of unobserved experience and observed behaviour respectively, seems to be inevitable in the very structure of person-language. It is, perhaps, preferable for Strawson to admit the logically incoherent character of the actual concept of person. The linguistic dualism between first-person and third-person ascriptive uses of consciousness-predicates cannot, by some form of reductionsim, be brought toward third-person side to bridge the inevitable gap so as to avoid scepticism. What I mean to say is that the axiomatic and tacit nature of self-knowledge must not be deprived of its due place. A deeper examination of the conceptual scheme of person-language cannot but reveal this truism. But then, we must not pretend that the two sufficient conditions have exclusively independent reference to ourselves and others. We must agree with Strawson that there is no hope of a satisfactory solution by having two concepts of a person, but it is not true that we have to apply the 'inner' criterion to ourselves and the 'outer' to others. We may attribute a state of consciousness, say depression, to a person other than ourselves with no behavioural evidence but only autobiographical testimony to such experience. Urmson has aptly described this fact in his review of *Individuals*.[11]

Another important point to be noticed is the ascription of M–predicates to the concept of person. A person's body must be given a different conceptual status or meaning; otherwise the subjecthood, or rather personhood, looses its essential connotation. Strawson does not distinguish the person's body from the physical body. A person's body is not something distinct from the person at all : it is not a kind of individual at all, but simply those aspects of a person which are physically distinctive. But Strawson seems to have made no distinction between the philosophical sense of a person's body and an empirical scientist's sense of a 'human body'. To quote his own words, " . . that which one calls one's body is, at least, a body, a material thing. It can be picked out from others, identified by ordinary physical criteria and described in ordinary physical terms".[12] The question 'What is a person?' (and also 'What is a person's body ?') is a question to be answered by conceptual analysis, not empirical investigation. If this is the fact, then what follows from Strawson's concept is that a person does not *have* the body, but he *is* the body. Hence a person is identified with the body he *has*.

Strawson's metaphysical theory of person, as it thus appears, suffers from various complications, both ontological and epistemological. A recent paper by Donald Stevert[13] presents an excellent account of the serious epistemological difficulties involved in Strawson's concept of person. But, after all, I must admit that Strawson's thesis has stimulated profound research into the deeper implications of this concept. I feel that a re-thinking by him may lead to better consistency, but in that case he has to question his very presuppositions.

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PRESENT DAY SCIENCE AND ITS IMPACT ON RELIGION

The debate between science and religion has been repeated over and over. The present century is surely an age of science. Hence, "man seems to be faced with an unbridgeable gulf", says H. J. Paton, " between science and religion—or it might be better to say—between knowledge and faith. This is a permanent human predicament as well as a modern one, but at the present time it is particularly cruel. Religion was born and bred in a world different from ours—a tiny, comfortable world, full of signs and wonders, and divine interventions, where it was easy for man to consider himself the end for which all things were made. That ancient world has been nibbled away by science, and the question arises whether against a new and scientific background, religion in any form will find it possible to survive".

Not only is science progressing, but this progress is getting to be more and more rapid. Things which were considered almost impossible some time ago, have been realized one after another and the progress of science seems to have no sign of stopping. It seems one day science may be capable of solving all the problems, if the developments continue at the present tempo. But we wonder, whether the happiness of mankind will also be increased in accordance with the progress of science. Hence, certain questions come into our mind—where does all this scientific progress lead us ? Can science tell us about the future of mankind ? Let's see how religion has been able to survive in this age of science.

Present day science has brought over so much of changes in human life that the development of science has become a human problem. When man's intelligence reached the height of civilization, people, as well as the scientists thought and believed that the age has come when science will make its greatest progress. No doubt, people have endless hopes, dreams and expectations of the science of this age. But at the same time, although the achievements of science are the results of man's own skill which have changed the environment of man totally, yet most of these are not willed by men. At the present time, what preoccupies our mind is scientific warfare. The men of the modern world are drunk with power. Everyone wants to out smart the other by his scientific achievement. The feeling that he can do something new, which no one can even afford to think gives him pleasure. And as a result, in spite of all our power and technological developments, we feel insecure. It is undoubtedly true that science has always been associated with war and that is why we are feeling so insecure. "It is evident", as Bertrand Russell says, "that if scientific skill is allowed free scope, the human race will be exterminated, if not in the next war, then in the next, but one or the next but two—at any rate at no vary distant date". If the war is too scientific, there is every possibility to anihilate all the living creatures on earth by the modern weapons. It is only the increase of scientific skill which has made war more and more dangerous. Hence, the changes that have been brought about by it, cannot be said to be wholly good for human beings. It has been always a doubtful question whether science is a blessing or a curse to mankind. It "provides man with a most potent instrument, but it provides no direction for its use. This is like putting hydrogen bomb in the hands of a child". Mr. H. J. Paton's opinion in this respect is quite noteworthy—when he says "science is, as it were, a machine constructed by man in order to master the universe, but the machine has turned against its maker and seeks to master him as well". The miraculous development of science has made men its slave.

Quite a few years back, a book entitled 'Report From the 21st Century' was published in the Soviet Union which I happened to come across in Daisaku Ikeda's book 'Science and Religion'. Under a subtitle 'Russian Science Predicts' the book reveals 10 simplified accounts of what will go on in the century to come.

1. Plastic and synthetic fibre—that even God could not create will replace natural products. The twenty first century will be an age of Plastics.

2. Coal will be made into gas underground and man will be freed from underground natural works.

3. A doctor may have only to push a button in an operation room filled with machines, which will examine patients.

4. A doctor can perform a bloodless surgical operation, using supersonic waves, or can 'repair' the heart, removing it form the human body.

5. Physiology of sleep will be clarified and one or two hours' sleep will suffice. People can devote their surplus hours' to art, music, etc.

6. People can 'control' a child's sex, and can choose to bear a male or female infant as they wish.

7. People will orbit a man made sun into space over 20,000 or 30,000 meters high in commemoration of the beginning of the 21st century on the eve of the New Year 2,000 A.D.

8. Streets will carry cars, supplying them on the way with fuel and pedestrians' paths will move by themselves like an escalator, preventing traffic accidents. For air transportation a great number of helicoptors and jet aeroplanes will be used for short and long distance travelling.

9. People will fill up the 'Tatar strait' and construct a big power plant there. There will be no winter nor snow in Japan.

10. The moon will be the seventh continent of the earth. Periodical flights will be available between the earth and the moon, and a city will be built on the moon.

Though some of them have become possible—such as moon landing, heart transplantation etc., yet others are still like dreams at present. The prediction was made only a few years back—but now only we have got some of them. Hence, looking at those wonderful achievements, we can not say some day they won't come to realities. Science is the most outstanding achievement of the modern man. The man of to-day is the master of his fate. Let us take the example of the discovery of atomic energy. It is man, who has discovered it—it is his scientific skill for which he has been able to discover it. It did not envolve as something called science. The scientific skill of man has been proved in its greatest progress. But yet, we wonder, there are still many things originating from human life are left unsolved. Science by itself cannot satisfy the whole of man's need. In this regard Albert Einstein's view is remarkable—"Science has progressed too far in the present day society. There must emerge a new spiritual civilization to make full use of it". Here, even the most modern scientist feels the need for some kind of spiritual development which will lead man in the pursuit of truth in the right direction so that peace and happiness of mankind can be achieved. Science has been progressing in such a way that it can provide all the means necessary for a heaven on earth. But still, no development of science alone will solve our great problems. "Science cannot tell man what is right or what is wrong. All the progress science can make throughout human history will be wasted if man fails to answer the eternal question correctly". (John G. Kemeny.) Hence, no external thing can reach our problem. The most difficult problem is self-control. Science has given us enormous control over nature, but science cannot help us to control our own nature—which is very human. And for this, I believe, religion is the only great force which can discipline man's own nature. "It is a truism to say", says Dr. Radhakrishnan "that mankind is today in the midst of one of the greatest crises in history. Our predicament is due to the lack of adjustment of the human spirit to the startling developments in science and technology. In spite of the fact that the great scientific inventions have liberated us from servitude to nature, we seem to suffer from a type of neurosis, from cultural desintegration. Science has relieved us of grinding poverty, mitigated the tortures of physical pain. Yet we suffer from an inward lonliness". So. it is clear that scientific discoveries are not enough to avoid that 'inward lonliness'. It seems, true religion is the only way to lead mankind in the right direction to achieve real peace and happiness. True religion knows its responsibility to the whole of mankind. There is no change to be misled by religion. But it is equally true that the general impression that science is opposed to religion, is never true. The debate between science and religion has been always there, not because they are incompatible, but because of the fact that the modern scientific achievements are unfavourable to religious habits and attitudes. And another important thing is that, many of us assume that science is the only source of knowledge. But it is untrue. Because, true religion always leads science. When religion means a system of dogma, regarded as unquestionably true, it is incompatible with the scientific spirit. And such religions no longer have the same influence on men that used to have before. There is lack of truth. which is needed to reach the ultimate ends of life in those religion. Hence, we need a true religion which leads both science and religion in the proper direction. Here, by religion I mean that, through the help of which we can proceed to achieve the true happiness and which will help even to use the scientific discoveries for the peace and prosperity of the whole of mankind. So it is obvious, that science and religion are not incompatible. In fact, they are fittingly compatible. They are only two aspects of a culture. Science, as a technique, has a practical importance, to which no art can aspire. No doubt, " scientific knowledge has its dangers; but so has every great thing". But that does not mean that science contradicts religion. Science, in itself, is neutral, neither good nor evil. It is just an achievement of man's intelligence. Scientists cannot discover the truth which will serve only good purposes. As a matter of fact, the truth which science, discovers is no more than a ' truth ' itself and therefore, it is perfectly neutral. Hence, it is only man who judges the value of the truth discovered by science. Let's take the example of Nuclear energy in this regard. The energy generated by nuclear explosion contains countless powers. If the energy is directed towards good purposes, it would certainly promise man true happiness and prosperity. But if it is directed towards the opposite way, it will anihilate all living creatures. Hence, science itself is neutral. But it is man—who does everything. Science is not to blamed for it. And here, we need a guiding principle which can guide us to survive happily in this environment that has been brought about by our own skill. Increase of scientific developments should be accompanied by a right conception of the ends of life. So, it is obvious, that increase of science by itself is not enough to guarantee any progress in human life. So, we should remember that some sort of spiritual development is necessary in this regard—and where I think religion is the only way to guide us. Peace is that for which one deeply desires. The one who seeks only power—for its own sake, he has got no limit to it, when he has it he wants even more, but he does not know what's the end of it. Thus, he always suffers from a sense of emptiness. It is true, the seeker after power is never satisfied with anything. Because, power cannot satisfy the whole of man. Man is not a mere body of flesh and blood. He has got a deeper self for which external comfort is not enough. Hence, this higher self always seeks after truth—which can at least give some or the other way to the ultimate peace and happiness. Hence, science, if it is to enrich human life, should go hand in hand with the true religion which will lead every man of this world to reach the ends of life—the real peace.

In the language of Daisaku Ikeda, " Science cannot be divorced apart from human life. When a scientific method discovered through human factor, is applied to human society, it has to recover humanity ". So, religion should lead science so that scientific achievements may be used for peace and prosperity of mankind. True religion never contradicts modern developments. True faith is strong enough to help mankind in their persuit of truth and happiness. Those who say, that religion is unscientific, I think, have got limited knowledge of both religion and science. To react properly to the modern achievement of science, religion is necessary so that we can correctly grasp the meaning and proceed in the right direction. Hence to conclude the discussion I would like to quote Daisaku Ikeda, that " today religion is still alive, and it will exist forever as long as man himself exists. To neglect a religion is the fault of an ignorant man ".

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ASSERTION IN FREGE AND WITTGENSTEIN'S TRACTATUS[1]

I propose to discuss two men, Gottlob Frege and Ludwig Wittgenstein, the two languages they devised, and by implication, at least, the two different cultures they seem to have represented. Even this narrowing of the session's topic, " Language, Culture, and Man ", leaves me with material too vast to deal with in the limited time allotted. So I shall focus on one small area of their difference. The issue is whether a special assertion sign or "judgment stroke " is necessary to distinguish an asserted sentence from one that is merely propounded for consideration.

Modern symbolic logic dates from the publication in 1879 of Frege's *Begriffsschrift*. Eighteen years later, in his essay " On Herr Peano's Begriffsschrift and My Own, " Frege explained the motivation for his work in these terms: " I became aware of the need for a Begriffsscrhift when I was looking for the fundamental principles or axioms upon which the whole of mathematics rests." (III, 1)[2]. Frege then described briefly the need for a special symbolic language, or " concept writing ", in order to make all assumptions or premisses explicit, and also to make explicit the modes or forms of inference used in moving from premisses to conclusions.

Until a special artificial symbolic language has been constructed and adopted for use in a scientific community, one is forced to use ordinary language, natural language. But Frege continually warns us against this or that misleading aspect of ordinary language, even as he uses it, writing : " So a battle with language takes place and I am compelled to occupy myself with language although it is not my proper concern here." (VII, 519). Frege blamed previous lack of progress in studying the foundations of mathematics on ". . . . the logical imperfection of our languages " (III, 1), going on to explain that " The reason why verbal languages are ill-suited to this purpose lies not just in the occasional ambiguity of expressions, but above all in the absence of fixed forms for inferring." (III, 2).

Especially important among Frege's contributions to the development of symbolic logic was his invention (or discovery) of a theory and notation for quantifiers, propositional functions, and variables, far superior to anything previously devised. Dummett called it "the deepest single technical advance ever made in logic." (II, xv). The earlier insight of Kant that "existence is not a real predicate" is captured and built into Frege's notation. There the proposition affirming the existence of God is symbolized by the application of the existential quantifier to the concept "x is Divine" rather than by predicating existence of the Deity Himself. As Frege wrote: "Because existence is a property of concepts the ontological argument for the existence of God breaks down." (V, 65). The power of the new notation is best revealed in connection with multiply general propositions, where the order of quantification can be of decisive importance. Various fallacies are due to confusion about order of generalization. For example, Aristotle argued early in his *Ethics* that since every action is taken for the sake of some end, therefore, there is some end for the sake of which every action is taken. That argument has only to be symbolized using multiply general quantification for its error to be exposed. The case is the same for the variant of the "first cause" argument which proceeds from "Everything has a cause" to "There is a Cause of all things." (cf. VI, 1–13). Contrasting ordinary language's method of expressing quantification with the more precise method of his Begriffsschrift, Frege inveighed against "constructions in which language seems to have indulged in order to mislead logicians." (III, 5, see also IV, 13–14)

There is a tension, then, in Frege's *using* ordinary language in the process of *constructing* his Begriffsschrift, which he refers to as "a logically perfect language." (IV,70). The cause of that tension was recognized by Frege to be the fact that "... languages are unreliable on logical questions." (IV, 126)

Frege was aware, of course, that natural languages have uses other than the logical or scientific. Especially in his essay "On Sense and Reference", Frege acknowledged the legitimacy and importance of these other uses, writing: "In hearing an epic poem, for instance, apart from the euphony of the language we are interested only in the sense of the sentences, and the images and feelings thereby aroused. The question of truth would cause us to abandon aesthetic delight for an attitude of scientific investigation." (IV, 63). Of course the " ....shading, or colouring of the thought....is irrelevant for logic." (IV, 40n). Frege wisely remarks that : " ....what is essential depends on one's purpose. To a mind concerned with what is beautiful in language what is indifferent to the logician can appear as just what is important." (VII, 516). Frege notes that the " truth claim " that typically arises " from the form of the declarative sentence " does not do so when the latter "....lacks its usual force, e.g. in the mouth of an actor upon the stage...." (IV, 64). Ordinary language and Frege's extraordinary symbolic language were different, then, in that the former has important poetic, dramatic, and sentimental uses not shared by the latter.

Instead of analysing propositions into 'subject' and 'predicate' as the traditional logic would do, Frege followed the mathematical practice of discussing *functions*, *arguments of functions*, and *values of functions for given arguments*. Many different varieties of functions are admitted : *arithmetic*, *equational*, *descriptive*, and *propositional*.

Still another group of functions emerges when compound sentences of the sort we call " truth functional " are analysed. These are the truth functions expressed by " if (   ) then (   )," "(   ) or (   )," " not (   )," plus more complex truth functions by combining these. Sentences are the argument expressions inserted into the blanks of these truth function expressions, and the values of these functions for given arguments are truth values, which are expressed by the compound sentences formed by the insertion of sentences into the gaps of the truth function expressions.

It is obvious that a compound sentence like a conditional (or a disjunction or a negation) can be asserted without its component sentences or subordinate clauses being themselves asserted. Clearly, then, a sentence, even one declarative in form, can be uttered without being asserted. Frege may have been influenced by this consideration to introduce the special assertion sign, or " judgment stroke ", " ⊢ ", which when prefixed to a declarative sentence indicates that the sentence is asserted rather than simply uttered to express " a mere supposition ". (IV, 34)

In ordinary language there are many things done in addition to making assertions. Sometimes differences in the kinds of speech acts performed are signalled by punctuation marks, "?" and "!". Frege may have been influenced by these considerations in introducing the special assertion sign "|–". Had he been interested in all kinds of communication instead of just the scientific, assertoric kind, he might well have introduced a whole arsenal of prefixes appropriate to the interrogative, imperative, operative, etc., as well as the assertive.

Frege was well aware of the importance of context, on what speech act, if any, an utterrance in natural language performs. Context is not required merely to resolve the ambiguity of utterances containing indexical or token-reflevtive terms. Context and intention determine whether an utterance is an assertion. One of Frege's repeated examples shows this : "If an actor utters a statement on the stage, it cannot be said that he *really* asserts anything...." (VII, 569). If the formulae of the Begriffsschrift are to be independent of context in the way that expressions in ordinary language are not, something is needed to distinguish asserted from non-asserted formulae in it. Frege may have been influenced by these considerations in introducing the special assertion sign "|–".

Let us turn now to Wittgenstein's *Tractatus*, a difficult and fascinating book of wide-ranging influence, which has been said to be "virtually unintelligible without an understanding of its Fregean backgound" (II, 662). Wittgenstein's *Tractatus* presents a world composed of facts, (IX, 1.1) where a fact is the existence (IX, 2) or non-existence (IX, 2.06) of an atomic state of affairs,[3] which is a combination or connection (IX, 2.01) or configuration (IX, 2.0272) of objects, each of which is simple (IX, 2.02). The existence of an atomic state of affairs is asserted by an elementary sentence (IX, 4.21) which consists of names (IX, 4.22) in immediate combination (IX, 4.221). These names are simple symbols (IX, 4.24) each of which means an object (IX, 3.203). And the picture theory has it that : "The configuration of objects in a situation corresponds to the configuration of simple signs in the propositional sign", (IX, 3.21) which is "a picture of reality" (IX, 4.01).

Wittgenstein rejects the Fregean assertion sign, writing: "(Frege's 'judgment-stroke', '⊢' is logically quite maeaningless: in the works of Frege (and Russell) it simply indicates that these authors hold the propositions marked with this sign to be true....)" (IX, 4.442). Because Frege does not tell us explicitly why he introduced the judgment-stroke or assertion sign into his Begriffsschrift, we cannot be sure exactly what parts of Wittgenstein's *Tractatus* are supposed to negate Frege's reasons for introducing it. We have conjectured several kinds of considerations that may have influenced Frege in this connection. A careful reading of the *Tractatus* shows that Wittgenstein rejected all of them.

Although Frege was not altogether clear about the matter, it seems that he was inclined to apply his Begriffsschrift analysis to ordinary language. Even though all of his formulae that are not components of other formulae, in both his *Bregriffsschrift* and his *Grundgesetze der Arithmetik*, are assertions, Frege was cognizant of many non-assertoric uses of ordinary language. So Frege may have believed that the assertion sign was needed to distinguish assertions from non-assertions.

But Wittgenstein in the *Tractatus* limited *all* language to the seientific, assertoric use. Only "propositions of natural science" can be said (IX, 6.53): "....it is impossible for there to be propositions of ethics", (IX, 6.42) or aesthetics (IX, 6.421). "Propositions can express nothing of what is higher." (IX, 6.42) For Wittgenstein each elementary proposition is an assertion (IX, 4.21), every "proposition is a truth function of elementary propositions" (IX, 5) and "The totality of propositions is language." (IX, 4.001) So for Wittgenstein there was no need for an assertion sign to mark off assertions from non-assertions, because there are *only* assertions. It is not that all propositions are asserted, but rather that every utterrance is assertive.

We remarked that for Frege context was often decisive in distinguishing assertions from merely apparent assertions, as in the mouth of an actor on the stage. For Wittgenstein there are *only* assertions, so there is no need of context to mark them off, or of any special sign to do so in the absence of context. Wittgenstein's *Tractatus* would banish poets and actors as decisively as

Plato's *Republic* would. Incidentally, it should be remarked how singularly unsuccessful Frege's assertion sign would be in doing what it is supposed to do. An actor on the stage might write a message on a wall or a blackboard, and were Frege's views to become more widely known, the actor might even prefix his written message with the assertion sign—despite Professor Anscombe's prescribing such behaviour as "an inexcusable *faux pas*" ! (I, 113) Or a person speaking only to check on whether some sound amplification equipment was working could just as easily prefix his non-asserted "Testing : one, two, three, four" with the words, "It is asserted that"—without thereby transmogrifying his utterrance into an assertion.

Frege was sufficiently impressed by the difference between the non-assertive utterrance of a component of a compound sentence, and the assertive utterrance of the compound sentence containing it, to want to mark the difference by a special assertion sign. Wittgenstein might have replied that it was enough that each complete sentence was asserted and that no component—*qua* component—was asserted, with no need for any special sign to distinguish whole from part. But Wittgenstein went further than this, and in a highly original direction.

Wittgenstein denied that there are any components in the fully analysed forms of what we are accustomed to call "compound statements". The reasoning here turns on what Wittgenstein perceived to be an important distinction between two kinds of functions, that is, of what Frege had called "functions". These can be distinguished by differences in the relations of their domains and ranges. "Functions" whose values are included among their arguments, such as numerical valued functions of numbers, or truth functions of propositions, are called *operations* by Wittgenstein. "A truth-operation is the way in which a truth-function is produced out of elementary propositions" (IX, 5.3). Other functions, whose *values* are categorically different from their arguments, such as concepts and relations, are allowed to be proper functions. So mathematical operations and truth-functional connectives and operators are operations rather than functions. Wittgenstein sternly warns, "Operations and functions must not be confused with each other." (IX, 5.25)

The result of completing a function expression by inserting argument expressions in its blanks does contain those argument expressions. But the result of operating on a base need not contain that base, and the expression of the result need not contain an expression for that base, as the result of doubling the number 2 can be expressed simply as "4". Similarly, the result of negating the proposition "$\sim p$" can be expressed simply as "p". Thus "An operation can vanish (e.g. negation in '$\sim\sim p$' : $\sim\sim p = p$)." (IX, 5.254)

Now if the "compound sentence", that is, the result of operating truth functionally on one or more sentences, does not really *contain* any component sentences, then there is no longer any need for a special assertion sign to distinguish between an unasserted "B" in "If A then B" and an asserted "B". The conditional "If A then B" no longer need be regarded as literally *containing* "B" as component.

One can view the difference between Frege's and Wittgenstein's conceptions of logic and language in the following way. Scientific progress seems to be made for the most part by abstracting from the full richness and complexity found in "the state of nature". Galileo did not time apples rolling down hillsides. Instead he timed spheres made as nearly spherical as his technology permitted rolling down inclined planes machined and polished to as flat and smooth a surface as could be achieved. Thus he was able to formulate laws of falling bodies. But to apply those laws to apples rolling down hillsides is an enormously difficult task. Analogously, if logicians are to develop principles and methods for appraising the correctness or incorrectness of arguments, the arguments must be self-contained, isolated from the context of situation and presupposed backgound information needed to determine the significance of utterances in natural language. But Frege, for all his warnings about the way in which natural language is not "logical", (IV, 126) had the intention of analysing it according to the insights of his Begriffsschrift, and had the hope of directly applying Begriffsschrift results to it. For this to be accomplished it would indeed be necessary to be able to identify those utterances as assertions which can serve as ingredients of arguments. And for this purpose an assertion sign might be a useful device.

But in the *Tractatus* Wittgenstein was much more hard headed than Frege. In the development of logic Wittgenstein was willing to exclude all ethical and aesthetic considerations, and to restrict language to the language of natural science. There was no intention to apply logic to ordinary language, and, therefore, no need for any special assertion sign. From this point of view, since Frege and Wittgenstein had different intentions for the application of the symbolic logics they were developing, it is no wonder that they differed in their beliefs as to whether a special assertion sign was needed.

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NOTES

1. This paper was presented at the Golden Jubilee Session of the Indian Philosophical Congress at New Delhi, in Plenary Session IV on January 1, 1976. It was written while the author held a Fulbright–Hays Senior Research Fellowship in the United Kingdom in 1975.

2. References in the text are by capital Roman numerals to items in the list of References and by lower case arabic or roman numerals to the pages therein, except in the case of the *Tractatus* where the arabic numerals refer to the numbered passages of that work.

3. This translation of *Sachverhalt* is persuasively argued by Professor Stenius in his important and influential work on the *Tractatus* (VIII, 33).

EPISTEMOLOGY AND AN INTERACTIVE MODEL OF THE GROWTH OF KNOWLEDGE

1. Introduction :

The most decisive method of testing or evaluating an epistemological theory would seem to consist in seeking an answer to the following set of questions : Whether or not (a) it either implies or suggests a certain model of the growth of scientific knowledge ; (b) the statement of the model is a self-consistent one, i. e., it does not imply a denial of the fact of the growth of scientific knowledge—a fact of great significance about science ; and (c) the model is a useful one, i. e., the model has the useful consequence of rendering the growth of knowledge measurable and evaluable. Such a method can be said to share with the experimental method of science a vital methodological rule which may be stated very generally as follows : That the worth and contribution of a knowledge-claim of whatever level, or of a new idea, or of a theory, must be tested and evaluated in terms of its consequences rather than in terms of its generating sources whatever (cf. (12), p. 221).

An investigation of classical epistemological theories along the proposed method would show them to be either implying or suggesting what might be called non-interactive models of the growth of scientific knowledge, whose statements are self-contradictory and hence which do not satisfy the proposed test-conditions (b) and (c). In order to show that this is actually the case, it becomes necessary to consider first briefly what epistemology is supposed to be concerned with under the classical tradition. In the sections to follow I shall argue and show that, unlike the classical theories of knowledge, Prof. Karl R. Popper's theory of knowledge satisfies all the three test-conditions (a), (b) and (c) as proposed here.

By classical epistemology is to be understood here an age-old philosophical tradition, dominant to this day, under which epistemology is subjectivistically conceived of. Thus under this tradition problems of knowledge and their attempted solutions are sought to be formulated in pragmatical terms such as "belief", "certainty", "doubt", "assertion", "verification", "perceptual experience", "justified belief" and so on. These terms are all pragmatical terms in the modern semiotic sense of requiring reference to a "knowing subject". Most of the contemporary theories of knowledge can be said to belong in this tradition which reappears in them through such problems as the problem of the rock-bottom foundation of knowledge, i.e., the contemporary empiricist problem of the firm empirical basis of knowledge.

Interestingly, the subjectivistic character of classical epistemology explains why it concentrates on knowledge in the ordinary, pre-scientific sense of the term. More precisely it explains why classical epistemology concentrates on problems of knowledge as they arise out of the (theoretical) use of ordinary natural language rather than on those that arise out of the systematic development and use of the language of science.

It is clear that within the classical tradition epistemology does not and cannot *directly* deal with the problem of the growth of scientific knowledge; for the simple reason that problems of knowledge are made to center round a "knowing subject". And most of the contemporary theories of knowledge (such as the logical empiricist theory of knowledge) which go a step further to deal with questions directly arising out of science, retain their traditional classical character by treating the problem of the firm empirical foundation of knowledge as *the* fundamental problem of knowledge. Above all, the classical tradition has had the most undesirable consequence of restricting the contemporary epistemological investigations into science to only a part of what we call science. These investigations leave out of account the most vital part of science, viz., those scientific problems of ever-increasing theoretical interest to which the entire tradition of scientific enquiry owes its existence. In effect, one of the most important aspects of scientific theory is left uninvestigated. This aspect of scientific theory derives from a dynamic interactive relationship between theories and problems in science—a relationship that shows itself up in all scientific problem-situations and that characterizes the pattern of the growth of scientific knowledge.

The point of decisive importance is that the non-interactive models of the growth of knowledge are the only models that one can attempt either to *derive* or to *imagine* under the epistemological theories of the classical tradition (see (8), p. 181). Thus, induc tivism connected with empiricism in its various forms can be regarded as an excellent case of a theory implying a non-interactive model. Since in the inductivist picture of science "observation" and its " data " *alone* are assigned the unique role of " the source and the foundation of all knowledge ", the pattern of the growth of knowledge is, in effect, depicted as a *cumulative* pattern (See (12), pp. 129–130) involving *elements of a single kind* of organization (in this case " observation " and its " data ") which are held solely responsible for the phenomenon of the growth of knowledge. Such a picture of science can yield only a noninteractive model of the growth of knowledge, because, as it will be argued in a later section, it is only elements of different orders of organization and not of a single order of organization that can enter into interactive relationships with each other. Similar non-interactive models can be dervied from the epistemological theories of the rationalist tradition in philosophy; for in their case it is the reason *alone* or the intellect *alone* or the theory *alone* which constitutes the ultimate " source " and " foundation " of knowledge. Since any non-interactive model of the growth of knowledge can be shown to be self-contradictory in character the classical epistemological theories must be rejected because of their failure to satisfy the proposed test-conditions (b) and (c).

Understood as a model that sets a cumulative pattern for the growth of knowledge, the statement of a non-interactive model is bound to be self-contradictory in character. The most objectionable feature of such a model is its inevitable failure to do justice to the historically testified *interactive* pattern of the growth of scientific knowledge, which involves theories, problems, observations, experimentation, critical evaluation and argumentation and so on, all at a time so inseparably that these can, as a rule, be said to form complex wholes with degrees of complexity varying from one such whole to another and from one stage of investigation to another. Thus apart from implying statements about science (e.g. those implied by the empiricist-inductive model of science) that are historically false, non-interactive models cannot account for revolutionary changes in science that have proved to be methodologically vital to an uninterrupted growth of scientific knowledge. It must be admitted that such changes can be brought about by only those interactive forces which can reasonably be supposed to underlie all serious scientific investigation. Under non-interactive models, therefore, the very fact of the growth of scientific knowledge becomes impossible. As it will be argued in our subsequent discussion, it is true of any system of whatever level that without some kind of *interaction* between elements of different orders of organization rather than between elements of a single order of organization there cannot be any change and hence any growth whatever (cf. [5], p. 321).

2. The Cosmological problem and the Growth of Scientific Knowledge :

The problem of the growth of scientific knowledge is closely related to the cosmological problem of understanding the universe including what might be called the " man-world interactive system". The independent theoretical character of the former warrants the evaluation of a proposed epistemological theory in terms of the model of the growth of scientific knowledge which is either implied or suggested by the theory. From the fact that the cosmological problem plays a unique background role for both philosophy and science arises the question of finding an adequate and useful characterization of the *mode* of their respective contributions to cosmology—i.e., to the resolution of the cosmological problem (cf. [15], p. 15). As regards science, this question concerns the function and role of a scientific theory *vis-a-vis* the cosmological problem. It can reasonably be supposed that this question can be adequately tackled in terms of a detailed investigation of what might be called the theory-problem interactive relationship within the specialized fields of science. In this context it is noteworthy that cosmology has been able to make modest beginnings as a science only in this century largely as a result of a growing realization, among scientist and philosophers of science, of its *unilateral* dependence on the specialized fields of scientific investigation. And it is interesting to note that the physical theories proposed within the specialized branches of physics are being increasingly put to a non-customary use of constructing alternative cosmological models of the universe on their bases (cf. [9], p. 527). It is needless to emphasize that this new use of scientific theory in general is bound to lead to a reconsideration of the methodology of its critical evaluation.

The usefulness of a given model of the growth of scientific knowledge of an accompanying evaluative measure of this growth can be tested by considering their use in characterizing adequately the mode of contribution of a scientific theory to cosmology. In the sections to follow the Popperian interactive model of the growth of knowedge will be shown to pass this test by implying as such a measure the concept of the resolving power of a scientific theory—a concept in terms of which the mode of contribution of a scientific theory to consomology can be far more adequately characterized than in terms of any of the customary concepts. This model and its accompanying evaluative measure of the growth of knowledge will be further shown to have important methodological consequences for the critical evaluation of a scientific theory. Thus they will be shown to require : (i) that all such evaluation should center around the resolving power of a scientific theory; (ii) that the customary measures such as the empirical content and explanatory power of a theory, in so far as these are conceived after the classical non-interactive models of the growth of knowledge, must be abandoned as irrelevant; and (iii) that the concepts of these familiar measures be so radically revised or replaced independent of their classical models as to find a use for them within an interactive model of the Popperian type.

The term " resolving power " is borrowed from science where it is frequently used to refer to the ability of an optical system to separate closely related entities such as, e.g., the image of the two stars of a double star in case of telescope, the images of two points lying close together in case of microscope and two spectral lines in case of spectroscope. Here it is proposed to extend this scientific use of the term so as to refer to the ability of a scientific theory to give rise to new problems out of the old ones. Thus when under the impact of a newly invented theory an old problem or a set of old problems is reformulated in new terms, the reformulation involved can be attributed only to the resolving power of the newly invented theory. Because of a unilateral conceptual dependence of cosmology upon the scpecialized fields of scientific inquiry, the concept of the resolving power of a scientific theory is of special relevance to a proper understanding of this relationship. But it is equally important to a proper understanding of the theory-problem interactive relationship within the specialized branches of science.

The way in which and the frequency with which problems are discovered, formulated and reformulated in the process of scientific research and investigation is how an everincreasing resolution of the cosmological problem may be said to take place. Of chief theoretical interest and importance in the growth of scientific knowledge is the progress in the resolution of the cosmological problem. All advances in scientific knowledge that have resulted out of an increasing development of scientific theory in various fields have this chief characteristic of having contributed towards an ever greater resolution of the cosmological problem. This fact lends considerable support to the view to be proposed and defended in this paper, viz., that the excellence of a scientific theory lies neither in *solving* nor in *dissolving* a problem *once for all* but, instead, in its power to contribute towsards a greater resolution of the cosmological problem including those specialized problems that prompt its invention. A theory can be shown to be capable of accomplishing this task by leading to new problems of increased theoretical interest within the specialized fields of science. Thus the resolving power of a scientific theory can be roughly defined as its ability to lead to those new problems of greater theoretical interest which can be regarded as the newly resolved aspects of the cosmological problem including those specialized problems that precede and prompt its invention.

With the cosmological problem forming their common background, science as well as philosophy must be visualized as *starting* with most general theories or points of view as first tentative attempts to resolve the cosmological problem. That is, as specialized ways of investigating and resolving the cosmological problem, they *can* start only with most general points of view or theories including those which get *built into* the decisions to choose and select the objects of a more direct investigation than should be possible without them and with the cosmological problem left to itself. This consideration about the background-role of the cosmological problem will play an important part in our schematic representation of the interactive pattern of the growth of scientific knowledge.

3. Objectivist Epistemology and Popper's Theory of the Growth of Knowledge :

In this section we shall briefly discuss the relevant details of Popper's conception of an objectivist epistemology and his theory of the growth of knowledge with a view to characterize them in as precise terms as possible and as may facilitate their detailed examination in a later section.

In one of his recent essays Popper ([14], p. 365) formulates his conception of an objectivist epistemology as follows :

> Epistemology becomes, from an objectivist point of view, the theory of the growth of knowledge. It becomes the theory of problem-solving, or, in other words, of the construction, critical discussion, evaluation, and critical testing, of competing conjectural theories.

Although this conception can be said to have received its first elaborate expression in Popper's theory of the growth of knowledge as developed and advocated in his book *Conjectures And Refutations* (1963), it is only in the above referred to essay that it is developed in considerable detail. Its great historical significance may be described by admitting that it represents the first interesting attempt ever made decisively to depart from the petrifying traditions of the classical subjectivist epistemology which is inseparably associated with such great philosophers as Descartes, Locke, Berkeley, Hume, Kant and Russell, and, indeed, many contemporary philosophers.

The logical details of this conception are developed by Popper in the form of what may be called a third world argument or thesis. This brings us to his ([14], p. 333) threefold distinction between three objective and relatively autonomous worlds : (*a*) "of physical objects or of physyal states"; (*b*) "of states of consciousness, or of mental states, or perhaps of behavioural dispositions to act"; and (*c*) "of *objective contents of thought*, especially of scientific and poetic thoughts and of works of art". That, apart from their relatively autonomous character, the worlds (*a*) and (*b*) form an interactive system [(*a*) (*b*)] where (*a*) and (*b*) are in mutual interaction by virtue of certain interactive forces is admitted by Popper (see [14], p. 334). Of the third world (*c*) he ([14], p. 334) writes :

> Among the inmates of my ' third ' world are, more especially, *theoretical systems;* but just as important inmates are problems and *problem-situations*....the most important inmates of this world are *critical arguments*, and what may be called—in analogy to a physical state or to a state of consciousness—*the state of a discussion* or the *state of a critical argument;* and, of course, the contents of journals, books and libraries.

Without going into Popper's argument for the reality and relatively autonomous character of this third world (*c*) and the interesting conseuqences thereof, we pass on to his three main theses concerning epistemology, which are put forth and defended in the essay. These are as follows ([14], pp. 337–338) :

(i) that traditional epistemology with its concentration on the second world, or on knowledge in the subjective sense, is irrelevant to the study of scientific knowledge.

(ii) ..that the study of a *largely autonomous* third world of objective knowledge is of decisive importance for epistemology.

(iii) An objectivist epistemology which studies the third world can help to throw an immense amount of light upon the second world of subjective consciousnesss, especially upon the subjective thought processes of scientists; but *the converse is not true*.

To these Popper ([14], p. 338) adds what he calls " three supporting theses " thus :

(iv) ..that the third world is a natural product of the human animal, comparable to a spider's web.

(v) ..the third world is largely *autonomous*, even though we constantly act upon it and are acted upon by it : it is autonomous in spite of the fact that it is our product and that it has a strong feed-back effect upon us; that is to say, upon us *qua* inmates of the second world and even of the first world.

and (vi) ..that it is through this interaction between ourselves and the third world that objective knowledge grows, and that there is a close analogy between the growth of knowledge and biological growth; that is, the evolution of plants and animals.

The question immediately arises : Is there a single concept which can be regarded as central to Popper's objectivist conception of epistemology and hence as committing him to a particular theory of the growth of knowledge ? This question can be answered in the positive as follows :

The above quoted group of theses warrants the view that this central role goes to the concept of *interaction* which is considerably exploited by Popper to characterize (1) the processes within each of the three objective worlds as distinguished by him and (2) the processes arising out of their interactive relationships. The latter may appear in the form of various possible interactive systems such as $[(a) \longleftrightarrow (b)]$ or $[(b) \longleftrightarrow (c)]$ or $[(a) \longleftrightarrow (c)]$ at a time. The processes within the relatively autonomous interactive systems that the worlds (a) and (b) are respectively form the proper subject-matter of the specialized sciences like physics and psychology. Epistemology must primarily concentrate upon the processes of interaction within the third world (c) whose "inmates " can be said to form an interactive system of their own. And it must be admitted that while it is only in this capacity that epistemology " can help to throw an immense amount of light upon the second world of subjective consciousness ", the converse is not true.

Given this objectivist conception of epistemology as the theory of scientific knowledge, we will have now to find out what role, if any, the concept of interaction plays in Popper's theory of the growth of knowledge. In both the first and second editions of his book *Conjectures and Refutations* Popper (see [12], vii, ix) appears to characterize the learning process in general and the process of the growth of knowledge in particular as processes satisfying the principle of feedback control. This characterization is *implicit* in his general thesis concerning knowledge and its growth which he sums up in one single sentence : *That we can learn from our mistakes.* The principles which it is intended to express can be said to be of the same magnitude of significance to philosophy as the principle of feedback control is to the fields of technology and biological and social sciences. This point will be explained fully when we discuss the concept of feedback control in the next section. Here it should suffice to point out that Popper's objectivist conception of epistemology and his general characterization of the processs of the growth of knowledge commit him to a view according to which the growth of knowledge must be identified with the growth of science taken as an interactive system with problems, theories, critical arguments, observations, experimentation and so on as its *elements*. Accordingly, the problem of the growth of knowledge becomes the problem of sorting out the role which each of these elements has in the *dynamics* of the growth of this system.

Popper *implicity* construes the problem in this way when he ([12], p. 222) writes :

> ..we may say that the most lasting contribution to the growth of scientific knowledge that a theory can make are the new problems which it raises, so that we are led back to the view of science and of the growth of knowledge as always starting from, and always ending with, problems—problems of an ever increasing depth, and an ever increasing fertility in suggesting new problems.

A more detailed statement runs as follows ([12], p. 222) :

> Admittedly, our expectations, and thus our theories, may precede, historically, even our problems. *Yet science starts only with problems*. Problems crop up especially when we are disappointed in our expectations or when our theories involve us in difficulties, in contradictions; and these may arise either within a theory, or between two different theories, or as the result of a clash between our theories and our observations. Moreover, it is only through a problem that we become conscious of holding a theory. It is the problem which challenges us to learn; to advance our knowledge; to experiment; and to observe.

These statements clearly imply an interactionist view of the pattern of the growth of knowledge. According to this view the growth of knowledge and hence the functioning of the interactive system of science cannot be identified, at any stage whatever, with the functioning of any one element of this system taken singly. Popper's ([12], p. 222) statement that " science should be visualized as *progressing from problems to problems*—to problems of ever increasing depth ", is only an alternative way of saying the same thing. Especially when considered in the light of Popper's ([12], p. 222) view as to how problems arise, it implies that the growth of knowledge can be identified only with the functioning of the interactive system of science as a whole, where each element of the system is in constant interaction with the other elements (cf. [12], p. 222).

4. Feedback Control and The Principle of Universal Interaction.

An interactive system, whether a mechanical device such as a thermostat or a living organism such as man, is distinguished by a self-regulating mechanism of what has come to be known as feedback control. As a powerfully unifying concept in science, the abstract concept of feedback control is as recent as the science of cybernetics. But as a technological device it goes as far back in history as the third century B.C. when a Greek mechanician named Ktesibios is said to have invented a water clock embodying the principle of feedback control (see [10], pp. 111–112).

According to Norbert Wiener, the founder of Cybernetics, the feedback mechanism " is a method of controlling a system by reinserting into it the results of its past performance " (see [10], p. 111). This is explained by him ([18], p. 107) as follow :

> For any machine subject to a varied external environment, in order to act effectively it is necessary that information concerning the results of its own action be furnished to it as part of the information on which it must continue to act..This control of a machine on the basis of its *actual* performance rather than its *expected* performance is known as *feedback*..

Any system, natural or invented, embodying the feedback principle is thus characterized by the fact that the working of the system at a given time is, in the words of Abraham Kaplan ([7], p. 406), "itself a stimulus for the modification of the future course of its working ".

The great unifying power of the feedback principle derives from its key role in the dynamics of growth. All forms of growth and dynamic behaviour in nature are controlled by certain central regulatory processes embodying this principle. Recent recognition of its key role in the dynamics of natural growth has led to its widening applications in the fields of technology, biological sciences and social sciences such as economics and political science. As a result it has become possible for the first time to device economic and political systems with *inbuilt* mechanisms to maintain and regulate their dynamic functioning. Free market system of Adam Smith and the constitutional government are regarded as excelent examples of such systems in economics and political science respectively (see [10], p. 118).

An important consequence of the feedback principle as applied to the dynamics of growth is that a system embodying this principle must be *interactive* in character and *vice versa*. This consequence yields *a* principle of *interaction between elements of different orders of organization rather than of a single order of organization.* A relatively autonomous and dynamic interactive system can thus be characterized as one (*a*) which is constituted out of elements of different orders of organization rather than of a single order of organization with these elements in mutual interaction and (*b*) which has an inbuilt self-regulatory mechanism embodying the feedback principle. It follows that any talk of interaction between any two or more elements of a single order of organization would be a gross misapplication of the concept of interaction. That the radically inductivist and the radically deductivist conceptions of the system of science are excellent examples from the philosophy of science of such a misapplication is quite noteworthy. The former makes use of the self-contradictory idea that the system of science can result or grow from " interaction " between sentences of an observational framework alone. Whereas the latter makes use of an equally self-contradictory idea, viz., that the system of science can result or grow from " interaction " between sentences of a non-observational framework (i.e., theories) alone. In effect, they imply a *cumulative* pattern for the growth of knowledge and a denial of the fact that science forms an interactive system of its own kind.

In view of a very close relationship between the principle of feedback control and the concept of interaction it becomes necessary here to give a very general characterization of the latter as follows. The concept of interaction in the sense implied by the principle of feedback control may reasonably be regarded as the most fundamental concept on which the quantitative methods of most exact sciences rest. Hence the useful role which it can play in adequately distinguishing the quantitative concepts of science from their qualitatively or subjectivistically conceived counterparts in both pre-scientific and non-scientific discourse. For it is true that it is only in and through its quantitative concepts and their accompanying methods of measurement that science is capable of doing justice to what, through its assumptions and results, it tends to reveal as an objectively pervasive feature of the universe. This pervasive feature of the universe may be expressed by saying that the universe is an interactive system on the astronomical scale of the large as well as on the microscope scale of the small (cf. [3], pp. 127–128). The fact that all forms of measurement including observation are a proper sub-class of what may be called "universal interaction", involving varied interactive systems from the microscopically small to the astronomically large, points to the importance of the idea of interaction as a fundamental presupposition of whole science (cf. [18], p. 77).

As a result of above discussion the problem of the growth of knowledge may be construed as a problem of investigating the interactive system of science with whose uninterrupted functioning the growth of knowledge can be identified. It is clear that none of the elements of this system taken individually can serve as a useful object of such an investigation. Yet quite the contrary is assumed to be the case under the classical tradition where it is mostly either " observation " and its " data " *alone* or theory *alone* in terms of which the problem of knowledge is sought to be tackled. It is no surprising consequence of this assumption that the very idea of the growth of knowledge cannot be accommodated in this tradition. For all the modes of the growth of knowledge that one may attempt either to derive from or to imagine under the fundamental assumptions of classical epistemology are essentially non-interactive ones which imply that there is no such thing as the growth of knowledge. The reason behind this self-contradiction hidden in classical epistemology is that the classical tradition violates what we have found to be a fundamental postulate of science on the one hand and a principle of vital importance to the dynamics of growth on the other (cf. [2], p. 89).

5. An Interactive Model of the Growth of Knowledge.

The elements of the interactive system of science, which belongs in the Popperian " third world ", may be divided into two major kinds. To the first kind belongs that *group* of elements which has a direct and a primary role in the functioning of the system. Although the growth of knowledge can be very vaguely identified with an uninterrupted functioning of this system as a whole, for its measureability and evaluability the group of elements of the first kind must be specifically taken into account. Here the assumption is that the growth of knowledge can be said to register itself only in the form of the states of this group including the interactive relationships that grow within it. Let us refer to this group as group$_1$. Its members are none other than theories, problems and problem-situations.

The rest of the elements of the interactive system of science form another *group* which belongs to the second kind and which may therefore be referred to as group$_2$. The members of this group have an intermediate regulatory role in the functioning of the whole system. Thus their role is comparable to the vital role of a central regulatory feedback control system in the functioning of a mechanical system such as a thermostat or of a biological system such as man. The members of group$_2$ are none other than observations, experiments, measurements, invention and critical evaluation of alternative theories, tentative selection of theories, and perhaps reformulation of problems. The members of group$_2$ are bound by their common function of regulating the dynamic interactive relationship which binds together the members of group$_1$. They can be said to perform this function by means of what Popper calls " evaluative elimination ".

In what follows we shall not go into any details regarding the group$_2$—elements or their interactive relationships. Since we are concerned with the growth of knowledge as such, we shall restrict ourselves to group$_1$—elements, i.e., to theories and problems in their interactive relationship.

Study of how problems and theories interact in each other's discovery, formulation and reformulation can be regarded as the most appropriate way of investigating the interactive pattern of the growth of knowledge. As a rule, problems are not only formulated on the basis of some theory in the background but their reformulation is also frequently necessitated by the impact of newly invented theories. Thus problems in science may be likened to modern space-probing devices whose relationship with their technological matrix (which is involved in their designing and their launching into theoretically chosen orbits) is similar to that between problems and theories. Like space-probing devices which seek new pieces of information, problems function at the same time as *demands* for better alternatives to theories in the background. In this context, what applies in case of theories also applies in the more general case of a language which serves as a general structural background for the formulation of problems in a given field of inquiry. The use of the whole logical structure of a language in the formulation of problems of theoretical interest must involve an implicit use of theories or beliefs which can be said to have preceded, initiated and influenced its development and hence which can be said to have got built into its very structure. Obviously, any slight modification or revision of this structure will have to be preceded by a corresponding revision of the older point of view by means of a better alternative. Thus like a theory, a language is subject to critical evaluation which can be most effectively carried out by developing competing alternatives to it. Such a critical evaluation becomes necessary under a critical approach to the investigation of the theoretical problems themselves.[1]

Popper's own view of the theory-problem interactive relationship can be found in the detailed statement of his theory of the growth of knowledge as developed by him in his book *Conjectures and Refutations* ([12], see section 4 above) and in his recent essay " Epistemology without a Knowing Subject " ([14]). In his latter work Popper ([14], p. 367) writes :

> Thus we can say that science begins with problems and proceeds from there to competing theories which it evaluates critically. . . .

> In most cases, and in the most interesting cases, the theory will ultimately breakdown and thus raise new problems. And the advance achieved can be assessed by the intellectual gap between the original problem and the new problem which results from the breakdown of the theory.

The idea of the pattern of the growth of knowledge as formulated by these sentences is more precisely expressed by Popper ([14], pp. 346, 367) by means of the following schema :

$P_1 \rightarrow TT \rightarrow EE \rightarrow P_2$;

that is : problem P_1 – tentative theory – evaluative elimination – problem P_2.

While explaining this schema Popper (14], p. 367) writes :

> The evaluation is always *critical*, and its aim is the discovery and *elimination of error*. The growth of knowledge—and thus the learning process—is not a repetitive or a cumulative process but one of error elimination. It is Dawrinian selection, rather than Lamarckean instruction.

It is interesting to note that the pattern of the growth of knowledge as depicted in the above schema is most emphatically compared by Popper with the pattern of its biological analogue in the organic world of evolutionary growth (see [14], p. 338). Thus describing the above schema as "evolutionary" (see [14], p. 351), according to Popper ([14], p. 346), this schema "gives a rational description of evolutionary emergence, and of our *self-transcendence by means of selection and rational criticism*."

In view of an overall precedence of theories over problems in science, which Popper ([12], p. 222) himself can be said to admit rather implicitly and which our preceding considerations regarding (i) the background role of the cosmological problem and (ii) the formulation and reformulation of problems in science tend to imply, Popper's schema of the growth of knowledge may be modified in the following manner :

$BT \rightarrow P_1 \rightarrow TT \rightarrow EE \rightarrow P_2$;

that is : background theory – problem P_1 – tentative theory – evaluative elimination – problem P_2.

If the contribution and consequences of Popper's theory of the growth of knowledge are to be seriously tested at all then it becomes necessary to give a more precise characterization of this theory than is permitted by such primarily biological concepts as 'evolution', 'selection' and 'emergence'—concepts which Popper heavily relies upon to give a precise expression to his theory. However, it is clear that far from being incompatible with each other, the concept of interaction is of a far more fundamental character than any one of these biological concepts. It is important to note that even the evolutionary pattern of the biological growth with which Popper compares the pattern of the growth of knowledge is embedded in certain fundamental processes of interaction. Thus the evolutionary growth of the organic world as a whole can be said to owe its existence to that interactive system which the organic and inorganic worlds as its elements constitute.

The purpose of a precise characterization of Popper's theory of the growth of knowledge can be, therefore, adequately served if the above schema is interpreted as describing what we propose to call a simplified "interactive model of the growth of knowledge". The theory-problem interactive relationship as depicted in this schema is shown to depend upon a vital interactive process represented by the step (EE) of evaluative elimination. This part of the interactive model can be said to cover the interactive relationships between what we called earlier the group$_1$—elements and the group$_2$—elements of the interactive system of science.

Given an interactive model of the growth of knowledge of above description, mainly two kinds of interactions can be said to keep the system of science functioning. These may be called in-group interactions and inter-group interactions respectively. In-group interactions take place within each of the two—groups of elements of the system distinguished above : group$_1$ and group$_2$ —elements. Whereas inter-group interactions between these two groups are what give the whole system its dynamic interactive character.

In order to consider the consequences of the use of an interactive model of the type under consideration, it is necessary first to make a few clarificatory remarks about the logical status of such a model. It would be a mistake to suppose that a theory of the growth of knowledge and an accompanying model of this growth are concerned with how a generally accepted body of knowledge has *actually* developed. It would be a mistake to suppose so precisely because then a theory of the growth of knowledge would be indistinguishable from a history of ideas. At the most, a theory of the growth of knowledge would function as the *kinematics* of the growth of ideas. But if a theory of the growth of knowledge has to be something interesting and different then it must concern itself with the dynamical problems about the growth of knowledge; such a theory must function as the *dynamics* of the growth of knowledge. And it is only in this capacity that a theory of the growth of knowledge can provide interesting answers to such dynamical problems of central importance as : (*a*) What is the growth of knowledge ? (*b*) How is the growth of knowledge possible ? and (*c*) Does growth of knowledge follow any measurable or objectively evaluable pattern ?

To show how Popper-type interactive model of the growth of knowledge satisfies this description it should suffice to consider the type of answers it provides to the three chief dynamical problems stated above. We shall consider them below in the same order in which these problems have been stated.

(*a*) *What is the growth of knowledge to be identified with* ? The question of the nature of the growth of knowledge is noting but a question of determining the identity of this growth. According to the Popper-type interactive model of the growth of knowledge, this growth must be identified with the changing states of the group$_1$-elements of the system of science, which include the interactive relationships that grow within this group. Thus, in effect, the growth of knowledge is identified with the growth of problems and theories in their mutual interaction. According to this conception the absence of the growth of knowledge becomes identical with a situation in which an already existing theory—problems interactive group is receding in the background, as a result of its interaction with the group$_2$—elements of the system of science, without being replaced by a new group of the same type (cf. [12], p. 241). All problem—situations in science can be regarded as situations of this type. And all such situations must be recognized as potential growth–situations. For when a receding theory-problem interactive group finally leads to the formation of an alternative group a problem-situation is turned into a growth-situation. Historically, first interesting example of a growth-situation is found in Copernican revolution in the field of astronomy. By turning a long existing astronomical problem-situation into a growth-situation, Copernican revolution initiated a process of continual growth which has taken entire science into historically unanticipated directions and made revolutions a part and parcel of *normal science*.

(*b*) *How is the growth of knowledge possible* ? To the question of how is scientific knowledge possible Kant's answer amounted to a principle of interaction between the senses and the intellect, i.e., between the data supplied by the senses on the one hand and the categories of understanding and forms of intuition on the other. But Kant committed the mistake of taking away the dynamic element in this principle by construing the interactive elements as fixed once for all and hence as of a static nature. This enabled Kant to stick to his belief in the absolute truth of Newton's celestial mechanics (see [12], pp. 184–192).

In the context of Einsteinian revolution and the consequent problematical character of Newtonian celestial mechanics, Kant's problem of how is knowledge possible should be reformulated as the problem of how is the growth of knowledge possible. For when nothing in science ought to be accepted as *sacrosanct* and as an absolutely valid piece of knowledge and hence when knowledge becomes identical with the *growth* of scientific knowledge, Kant's formulation loses all theoretical and methodological interest.

From the interactive model of the growth of knowledge under consideration it is clear that the problem of how the growth of knowledge is possible has a very simple answer. The step (EE) of evaluative elimination in this model has obviously the most vital role of maintaining and regulating the process of this growth. In evaluative elimination the group$_1$ and group$_2$-elements enter into inter-group interactions, with the latter group operating as a feedback control system upon the former. It is these interactions which always determine scientific problem-situations as potential growth-situations. Thus growth of knowledge becomes possible because evaluative elimination always makes it possible not only to determine ever new problem-situations on the bases of given theory-problem interactive groups but also to replace them by growth-situations in the form of newly formed theory-problem interactive groups. It is precisely due to the feedback control process of evaluative elimination that in science all problem-situations function as potential growth-situations and all growth-situations as potential problem-situations.

Historically first interesting example of a scientific problem-situation being replaced by a growth-situation is provided by the sixteenth century Copernican revolution in the field of astronomy. In this case the serious difficulties that were faced by the long-dominant geocentric theories of planetary motion *determined* the astronomical problem-situation which the Copernican revolution replaced by a growth-situation in the form of the heliocentric theory as an alternative solution to the Greek problem of "how to explain the apparent movements of the heavens in terms of motions that were circular and uniform" (Cf. [11], p. 101). It is interesting to note that in the beginning of the seventeenth century, the Copernicus' version of the heliocentric theory came under a process of evaluative elimination which was carried out by Johannes Kepler. Inspired by the characteristic accuracy of the astronomical measurements of Tycho de Brahe, the famous sixteenth century Danish astronomer, Kepler was perhaps the first to realize the need for deriving accurate predictions from the heliocentric theory. This was demonstrably impossible so long as the theory incorporated the Greek assumption of the circular and uniform character of planetary motions. Kepler eliminated this Greek ingredient of the heliocentric theory and discovered his famous three laws of planetary motion, two of which asserted the elliptical and non-uniform character of planetary motions (cf. [11], pp. 106–107, 125.)

How a new astronomical problem-situation arose out of the heliocentric theory and the observations of Tycho de Brahe is best expressed by Brain Ellis ([1], p. 40) as follow :—

> The planetary theory of Kepler, and thus, ultimately the astronomical observations of Tycho de Brahe, had created the need for a non-homocentric system of dynamics. When it became no longer possible to accept that the earth was

the centre of the universe, a system of dynamics that was not earth-centered was clearly needed. The homocentric dynamics of Aristotle were an anachronism in the heliocentric universe of Kepler.

This new problem-situation was left, as history would have it, to Newton to tackle, which he did by discovering the three fundamental laws of classical dynamics—Newton's laws of motion. Newtonian mechanics involving his famous law of universal gravitation was similarly preceded by a whole problem of assigning a mechanical explanation to the motions of the planets. Galileo's researches into terrestrial mechanics showing "that the gravity of the earth bent the inertial motion of a projectile into a parabolic path" had significantly raised this new mechanical problem (cf. [11], pp. 123, 128 and [19], p. 148).

6. The Resolving Power of a Scientific Theory.

Does the growth of knowledge follow any measurable or objectively evaluable pattern ? So far as the interactive model of the growth of knowledge is concerned, this question must be answered in the affirmative. This question therefore, reduced to the question : What concept/concepts may be adopted as an objective evaluative measure of the interactive pattern of the gwowth of knowledge ?

Our discussion so far warrants the introduction of a new concept, viz., the concept of the *resolving power of a scientific theory* as *a* measure of the growth of knowledge. This does not imply that the customary measures such as the empirical (informative) content and explanatory power of a theory must be abandoned in favour of the newly adopted measure. Since the former have been mostly conceived under and associated with the customary-non-interactive models of the growth of knowledge (such as, e.g., the inductive model) only a radical revision of our concepts of these measures is necessitated by the interactive model. Popper again makes an interesting exception in this case in that his concepts of the customary measures are distinctly non-traditional and in consonance with his theory of the growth of knowledge (see [12], pp. 385, 391; [13], pp. 286–287; [15] pp. 119–121).

Popper's own suggestive idea of "assessing" the advancing steps in the growth of knowledge in terms of "the intellectual gap between the original problem and the new problem which results from the breakdown of the theory" (see (14], p. 367) unambiguously points in the direction of the concept of the resolving power of a scientific theory as *a* measure of the growth of knowledge. The proposal to adopt this concept as such a measure is thus clearly warranted both by the interactive model considered above (section 5) and by our earlier considerations regarding the role of the cosmological problem (sec. 2).

The concept of the resolving power of a scientific theory as a measure of the growth of knowledge can also be shown to be implied by one of Popper's ([12], pp. 241–242) three requirements for the growth of knowledge. The three requirements as formulated by Popper are: (1) "The new theory should proceed from some *simple, new and powerful unifying idea* about some connection or relation (such as gravitational attraction) between hitherto unconnected things....or facts....or new 'theoretical entities'...."; (2) "....the new theory should be *independently testable*....'; and (3) "the theory should pass some new, and severe, tests" (see [12], pp. 241–242). The requirement (1) essentially requires a scientific theory to possess adequate *explanatory power* such that it explains all the *explicanda* which it was designed to explain (see [12], p. 241). The requirement (2) of independent testability as explained by Popper requires that a scientific theory should *also* "have new and testable consequences (preferably consequences of a *new kind*)"; that "it must lead to the prediction of phenomena which have not so far been observed" (see [12], pp. 241–242). This requirement can be said to require, in effect, that besides possessing adequate explanatory power, a scientific theory should also possess adequate resolving power such that it can suggest new experiments, new tests and hence lead to new problems. This interpretation is amply supported by Popper's own view of the requirement of independent testability. To quote Popper ([12], p. 242):

> ....the second requirement also ensures that our new theory will, to some extent, be fruitful as an instrument of exploration. That is to say, it will suggest to us new experiments, and even if these should at once lead to the refutation of the theory, our factual knowledge will have grown through

the unexpected results of the new experiments. Moreover, they will confront us with new problems to be solved by new explanatory theories.

Like the requirement (3) of "empirical success", the requirement (2) of independent testability is regarded by Popper as indispensable. Their indispensability is said to consist in their ruling out from science "trivial" and *ad hoc* theories ([12], pp. 241, 244).

To illustrate how the resolving power of a scientific theory might be visualized, let us consider a very simple example of Darwin's revolutionary theory of organic evolution. This theory may be said to derive its revolutionary character from its recognition of the organic world as a feedback control system that is self-regulating. Because of the simple fact that the organic world owes its dynamic character partly to its participation in the interactive system of the entire universe, Darwinian revolution crosses the boundaries of the biological sciences and penetrates deep into the field of physical sciences whose theories are generally of a direct relevance to the cosmological problem. It may not be thus surprising to find the concept of evolution being applied on the astronomical scale in various cosmological models scientists have constructed in this century. Both the "Big-bang" and "Steady-state" models of the universe are examples of such an application. Both these models employ the idea of an evolving universe.

This shows that the scientific relevance of the concept of evolution as Darwin conceived it is not exhausted by its merely *explanatory use* to which it is put in the biological sciences. On the contrary, crossing the boundaries of the sciences of its origin, the concept of evolution proves of a high resolving power in its current use both in the formulation of the cosmological problem and in the cosmological models that have been developed as attempted solutions to this problem.

Before considering the resolving power of a scientific theory as a measure of the growth of knowledge further in terms of its important methodological implications for science, the following historical remarks deserve some consideration. Historically, it is true that a constant increase in the resolution of scientific problems has been registered largely as a result of a constant development of scientific theory. This is also true of science as a *whole*. Thus the prominent stages in its historical development are noteworthy: the gradual evolution of science into an independent and autonomous tradition of inquiry, free from the grip of ancient philosophical traditions; the gradual development of science into relatively autonomous specialized fields of inquiry; and, subsequently, their increasing tendency to multiphy further in the direction of on increasingly specialized inquiry. Such a growth can be attributed mainly to an overall change in the older intellectual values, beliefs, theories, problems and methods of inquiry and their replacement by new alternatives.

Thus we can reasonably say that the history of the various branches of science such as physics is a history not of how certain problems may be said to have been "solved" once for all by means of certain theories, but of *a constant interaction between theories and problems with frequent feedback consequences for each other*. It is thus a history of intellectual progress which is characterized by frequent transitions from highly complex and ambiguous problems to increasingly simpler and precise ones. Even the development and division of science into increasingly specialized fields of inqurіry excellently illustrates a process in which there is a gradual and sometimes a quick transition from a set of complexer problems to a set of simpler ones. Thus if our scientific knowledge can be said to have registered any *substantial* and *lasting* growth over different periods of the historical development of science, then it consists chiefly in the fact that the present-day scientific theory generally possesses a far greater degree of resolving power than the older theory did. That is to say, in other words, the present-day scientific problems are the highly simpler, precise and hence greatly *resolved* versions of their highly complexer and ambiguous *ancestors*.[2]

It is equally reasonable to say that the ever increasing resolving power of a scientific theory also shows itself up in its direct technological consequences for the development and designing of increasingly sensitive experimental devices that are *in turn* used in the testing of its explanatory and predictive power. Thus, for example, the sensitive character of experiments that are designed from time to time to determine the numerical values of the fundamental physical constants "to ever greater levels of accuracy" is intimately related to the resolving power of the basic physical theories in which these constants occur (see [17], pp. 63-66; 77-78).

We may now turn to consider briefly the methodological consequence of adopting the resolving power of a scientific theory as a measure of the growth of knowledge. In section 5 above it was suggested that all specific problems of theoretical interest must be construed as demands for better alternatives to the theories in the background. Thus, construed, it becomes clear that their discovery and formulation presuppose and largely depend upon the theoretical context provided by these background-theories. Thus their initial formulation must always be treated as *tentative* owing to the very character of the problem-situation of which they are a part. And, when alternatives (the so-called "solutions" in the customary idiom) are discovered and developed, their feedback consequences for an improved reformulation or resolution of the original problems into simpler and precise versions must be investigated before any other conclusions are drawn. On the basis of this simple consideration, we may propose, as a methodological rule, that the critical evaluation of a scientific theory must not remain restricted to the customary concepts of its empirical content or explanatory power; but, instead, it must go beyond these to evaluate its feedback consequences for an improved reformulation and resolution of those problems that prompted its discovery.

Our consideration, in section 2 above, of the cosmological problem *vis-a-vis* the growth of knowledge strengthens further the above stated methodological rule. With the cosmological problem in the background, the idea of the resolving power of a scientific theory makes excellent sense, especially in connection with the problem of characterizing adequately and very generally the *mode* of contribution of a scientific theory to cosmology. The way the cosmological problem gets increasingly *resolved* into more and more specialized problems, as a result of a constant development of specialized scientific theory, may be said to yield such a characterization. Hence the importance of the resolving power of a scientific theory as a measure of the growth of knowledge. Such a measure is thus methodologically important in that it permits critical evaluation of a scientific theory taken in its two-fold relationship with the specialized problems within science and with the cosmological problem.

7. Concluding Remarks:

In conclution we may say that two most important (functional) aspects of a scientific theory are : (1) its explanatory power with which it "solves" older, *antecedently known* probldems and (2) its resolving power with which it gives rise to newer problems out of the older ones. Thus the familiar concept of the explanatory power of a theory can be regarded as appropriate to all those contexts in which a problem or a set of problems prompts the discovery of a theory or theories as its attempted solution. But this concept *cannot* take care of the other more important function of a scientific theory, viz., the fonction of giving rise to ever new problems or making an ever greater resolution of the cosmological problem possible. Thus the proposed concept of the resolving power of a scientific theory can be regarded as most appropriate to all the contexts of *problem-resolving* in science. The explanatory power and the resolving power of a scientific theory thus turn out to be essentially interactive concepts referring respectively to the interactive processes of *problem-solving* and *problem-resolving* in science. These two concepts together with the concept of the empirical content of a scientific theory may be said to constitute *the* evaluative measure of the growth of scientific knowledge.

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NOTES

A previous version of this paper was read at a meeting of Teacher's Seminar of Philosophy Department of Visva-Bharati, Śantiniketan, sometime in the Autumn of 1971.

1. For an interesting, though brief, treatment of the question of the role of language in the formulation and solution of problems see ([4], pp. 183–186 and the footnote (151), pp. 254--257); and cf ([12], p. 129).

2. The word " resolution " or " resolving power " is invariably used in this paper in the sense as defined in section 2 above. It is interesting to note that certain recent re-interpretations of (1) measurement in science and (2) the growth of knowledge in information-theoretic terms such as the *quantity of information* come very near the concept of the resolving power of a scientific theory as proposed here (see [6], pp. 4; 87--88 ; 102–107).

ENDS AND MEANS IN POLITICAL IDEOLOGIES

When one turns to a study of political thought of our times, one is likely to get struck with a singular fact about it : there seems to be an eclipse of the great debates over political ends, the ultimate values that ought to be cherished, and the vision of ideal society with regard to ends-goals. I do not believe that this is due to an acceptance of the philosophical view that values are in the last resort beyond the scope of rational discussion. It seems to me that the lack of it may be due to the fact that such debates are no more considered to be crucial or even important. After all, since ancient times the men of vision from Plato to Marx and Gandhi haev dealt with the question of political ends and have woven wonderful dreams of ideal societies. Perhaps then as far as the ends, the ultimate values that get realised in the ideal society of our heart are concerned, there is a general consensus amongst the dominant ideologies. It may be ventured that there is a general picture of the ideal society which carries a more or less universal appeal. This is the society of true actualization of equality, freedom, respect for the dignity and person of man. In it are all gulfs between man and man bridged, and true fraternity realized. There is now a growing feeling that such gulfs and hatred, fear, violence of man against man will remain as long as society is divided between the rich and the poor, the oppressor and the oppressed, the exploiters and the exploited. Thus, it is the stateless, class-less society of Marx, the non violent society of Gandhi which picture on ideal society. And of course equality, freedom, fraternity, respect for dignity of man are claimed to be the inspiring ideals of western liberal democracies.

If the ideals and ' vision ' are professedly common, our attention must now be focussed on the steps that we must take to bring ourselves nearer to them, on a discussion of the adequacy and validity of the means recommended and employed. But I think in this very respect have the political idealists and men of vision, by and large, failed us. The concern over means in a proper framework on means—ends relationships has remained one of the most neglected area of the picture builders, indeed if not of political thought in general. In the absence of any clear, definite and workable philosophy of social action by which the ideals may be realized in practice, grand utopias have been left hanging in the air, beautiful to contemplate but lacking in dynamicity and potency of practicability. In others, even while the necessity of means and practical methods was recognised, arising out of a fundamental mistakes in the understanding of the ends means relationship, the methods that were adopted so vitiated the actual practice that was carried on for ends' sake that the stated ends were transformed beyond recognition. The failure lies in ignoring the fact that means—ends form part of a continuum, the dichotomy between them being a product of abstraction. In practice, means and ends, are in-separably linked to each other. As Dewey maintained, ends in view is itself a means, namely a procedural means. He also warned that " only a recognition in both theory and practice that ends are of the nature of hypotheses which have to be tried out in practice as means could alter mistaken notions of dealing with social issues." [1] The fact is that in the vast complex network of multi dimensional and inter twining relations and forces that we call the social nexus, no action can be counted to produce just a single effect, the one intended by the actor. Rather, it sets in motion, so to say wheels within wheels to produce multiple consequences : some foreseen, others unforeseen, some desired others neither desired nor desirable. Keeping in mind the plural effects that flow from them, one will reject as incorrect a merely instrumental view of actions as means. Rather shall we feel compelled to recognise that they are creators also. The idea that ends justify means could have gained currency only because this dynamic and pluralist-consequences aspect of actions was ignored, and attention fastened so much upon some single end or consequence which is liked that all other undesired and undesirable consequences are blotted from perception. This pernicious doctrine used so often in politics lends itself to encourage in sincereity and in Dewey's words " puts a pseudo-stamp of moral justification upon success at any price."[2] Giving up the purely instrumental view of means and " ends justify means " notion leads to a recognition of the necessity of purity of means, as also of the inadmissibility of violence-based methods to effect social change and usher in the ideal society. For as ends do not justify means, not even the vision of a utopia in the offing can justify the large scale suffering, misery and privations as well as the eclipse of moral values that necessarily occur in violent revolutions and war.

Political ideologies that give a cavalier treatment to the question of means and take a purely instrumental view of them recommend use of violence in revolution as means. But this is really a weakness in the theory which lends itself to being seized by the tyrant and dictator for committing in-human acts of barbarism and negating the very values which are involved as ends to justify such acts as means. For example, the Marxist ideology seems to have floundered on this. In the name of brotherhood of mankind and of class-less society which is yet unborn, class-hatred is sown and fanned. In the name of the truly free society core all freedoms ruthlessly suppressed and for the sake of true equality and fraternity extermination of thousands is justified. Thus, lay the vision of the classless stateless ideal society embroiled in and shattered by violence as the absolute and all-pervasive rule of the more equal among equals tightened its noose and ruthlessly stifled the cry for freedom and dignity. The fact is that unless the means employed are themselves in the image of the ends and reflect them, we can hardly escape the pernicious denial of life now 'for the sake of' and in the waiting for the good life to come. No doubt the hope offered by these who could destroy all that is of value in and for man for the sake of a rosy future is a vain hope and the waiting a futile waiting as that of the tramps, waiting for Godot, whose message at the end of each day of waiting is, " Mr. Godot cannot come today, but will surely come tomorrow."

If violent revolutions suffer from such defects, the frequent use of war—the other major conventional instrument of effecting political control and resolving conflict—can be seen in no better light. For in war in an even greater degree than in revolutions prevail falsehood, deception and trickery as all scruples and concern for rights and wrongs, justice and injustice are thrown to the winds. Nothing matters except victory. It breeds and flourishes on fear, rage, resentment and hatred. The outcome of the struggle bears no relation to the rights or wrongs of the case and generally provides no constructive or durable resolution of the conflict. The defeated party lies low for a while nurturing deep resentment, hurt pride and revengefulness, waiting for an opportunity to overcome his humiliation. Violence is infectious and sets in motion a vicious circle, giving a setback to man's search for the good life.

II

The crucial question then in social and political philosophy is that of a discovery and use of a method which reflects and is in the image of the perennial aspirations of man—a method which bridging the artificial gap created between means and ends, considers them to be convertible. In the devising and effective use of such a method lie the unique contribution and challenge of Gandhi. There is no confusion in Gandhi's thought on the question of ends—means inseparability and the need for an uncompromising stand on the purity of means. "The means may be likened to a seed, the end to a tree; and there is just the same inviolable connection between the means and the end as there is between the seed and the tree."[3] He insisted that if one takes care of the means the end will take care of itself. "Means and ends are convertible terms in my philosophy of life."[4] "I feel that our progress towards the goal will be in exact proportion to the purity of our means."[5]

If this is so and the baneful effects of violence in subverting the political ends are kept in view, it follows for Gandhi that violence must be banished as the legitimate method of social change and resolution of conflicts. This line of thought, he took to its logical conclusion and showed the way to social reconstruction through truth and non violence. Through his constructive programme, he recommended a decentralized society of small, relatively simple and self sufficient villages which creates the right kind of socio-political, economic, moral climate for a life of peace, harmony, brotherhood, freedom and respect for persons and minimization of injustice and conflicts. But conflicts cannot be ruled out and in Satyagraha, he gave a truth seeking, truth making, non violent method of resolving them.

The spirit of Satyagraha is in a fundamental way different from the methods based on violence and those followed in majority rule democracies. It is a method that aims at an agreed settlement and not just a victory for oneself or one's side. In its practice the rightness and wrongness, the justice and injustice of the case are never lost sight of, the ultimate values of freedom, respect and love for the person are to be adhered to throughout. "The appeal is never to his (opponent's) fear; it is, must be, always to his heart, the Satyagrahi's object is to convert, not to coerce the wrong doer"[6] and while the Satyagrahi must attack what he believes to be wrong and unjust, he is forbidden to attack men. The respect and dignity of the individual must never be sacrificed in the heat of the conflict. "We must therefore, be over courteous and patient with those who do not see eye to eye with us. We must resolutely refuse to consider our opponents as enemies of the country."[7] To pass through the hard crust of rationalizations and closedness of the opponent, the dynamics of self suffering are to be applied. Suffering opens the eye of understanding. Through personal conscious suffering, moral persuation, ahimsa, love of the opponent, Satyagraha is rendered an active creative instrument of social change in the service of humanity. It alters social relationships without harming men.

Indeed, there was such an acute awareness in Gandhi of the dangers of the distorting influence of ego centred impulses in man that he regarded as a precondition a constant practice of ruthless-self examination with a view to purge oneself of love of comfort and attachment of any sort. Talking in the traditional religious idiom, he enjoined upon his followers the necessity of observing the five vows of *ahimsa*, *satya*, *asyteya*, *brahmcharya* and *aparigraha* and warned them against the gravity of involvement in satyagraha without the requisite self knowledge and self control by saying that, "unless you impose on yourselves the five vows, you may not embark on the experiment at all".[8]

Thus combining in its dynamic character the universal love and the passionate concern of the sage and the humanist with the activist's impatience and commitment to combat wrong and in justice, wielded by men who cherish above all total honesty to others and to themselves, satyagraha is altogether a new and wonderful thing in the history of social thought. As a constructive, creative, non-violent technique of social change it challenges the habitual ways of man's thinking with respect to the necessity of coercion in social, political life as based on an uncritical acceptance of violence and a failure of creative imagination. Its challenge extends not only to Marxism, Fascism and other deologies which accept violence and suppression of humanity and freedom either as justified in itself or as temporary means, but also to what may be described as western type liberal democracies which accept and, defend the so called 'legitimate' uses of violence.

Gandhi believed that there is no situation however complex and intricate, that lies beyond the scope of a constructive resolution by satyagraha. In view of the ends-means discussion and the subversive effect of violence for the cherished values of man, Gandhi's claim deserves serious attention and the method of satyagraha a fuller trial. In the full sense in which Gandhi sketched it, it cannot be said that it has been given a run even in India, the land of its birth. But the Gandhian method is new and bold and revolutionary and relentless in its demands of self control and subjugation of the lust for possessions and power. And it is much easier to settle in for the more 'realistic' method of social change through the structuring of social and political machinery and institutional devices. After all, the latter has been given a long try in the West and has been considered to hold promise for ushering in the ideal society of equality, freedom, fraternity, respect for human dignity and freedom in India also. However, the liberal democratic method with its emphasis on machinery, procedures and all too contrived instituional devices, with its assumption of broad agreement among the people and its hopes of the accepted procedures as adequate for a sound resolution of conflict can not deliver the goods.

If we take a close look at the way the system works we find that even when it is said to be working in a 'sucessful' manner, it can hardly be the harbinger of the ideal society. Bartering, horse-trading, lobbying, influence of big money, pressure tactices exaggerated claims and party politics—not to speak of wide spread corruption and misue of power—these have come to be recognised and accepted as the general features of the system. The original issues and their intrinsic merits and demerits are shelved to the background, the decisions are generally taken by a small coterie of the chosen ones, the partymen obey unthinkingly and the opposition makes it its duty to oppose the government policy on every issue. If there was any question of regard for truth, integrity, honesty, justice, realization of fraternity through a cooperative effort to bring genuine consensus, it gets lost in the heat of the machiavellian battle for power. While the majority acts on the wishes of their leaders and so has taken no real part in decisions, the minority feels neglected, unlistened to and nurtures grudges and resentment against what it regards as the tyranny and insensitivity of the majority. And if we keep in view the further fact mentioned above about it that in case of non-solution of conflicts through the accepted procedures and methods, the state as well as the citizenry has no resort but coercion and violence, the inadequacy of the democratic method vis-a-vis Gandhian satyagraha is made even clearer. Indeed the political experience of mankind only vindicates Gandhi's insight that the roots of all inequality, injustice repression, violence and exploitation, lie ultimately in the minds of men. Unless the heart is purified so that deep brotherly love, respect for other human beings and adherence to basic ethical norms of conduct become deeply ingrained in the mental-make-up, institutions and mechanical make-shifts and external devices are bound to remain contrived, artificial and in the long run ineffective. In communistic countries where the power is centered in a few hands if not in the hands of a single Big Brother, the hatred and violence of heart found expression in mass executions, and in torturing the 'enemies of the people.' The absolutist tyranny which is highly intolerent of any dissent or criticism gets established. The secret police is everywhere, the Big Brother is watching all, and in lieu of the promised land, men find themselves living under the cold and dark shadow of terror.

It seems to me then that Gandhism has definite claims of superiority over other ideologies. Further, a culture is not merely an aggregate of disjointed ideas about art, politics, social relations, morals, education and religion. Rather they are all integrated, organically inter-linked imbedded in a millien, a 'weltanschaung', a world-view. The singificance of this truth for political life is that forms of politics which have germinated in, grown and developed in an alien soil can not be just lifted and grafted on to the culture and way of life of a people. If we do so the results are likely to be bewilderment and lack of direction in addition to a sense of estrangement in the ordinary people and absence of any idealism with a consequent fall to hypocrisy and irresponsibility on the part of the elite. This points to a pressing need for developing political ideas and programmes in and for India, keeping the Indian conditions in mind and embodying the noble elements of the Indian tradition. Gandhi explicitly said that, "I would accept (foreign ideologies) only to the extent that I can asimilate them and adopt them to Indian scene."[9] Sadly aware of the dazzlement caused in the minds of his westernised colleagues by the models of India's rulers, he cautioned, "Let us not be obsessed with catchwords and seductive slogans imported from the west. Have we not our distinct eastern tradition? Let us study our eastern institutions in the spirit of scientific inquiry and we shall evolve a truer socialism and a truer communism than the world has yet dreamed of."[10]

A loving study of our own established traditions combined with his vision of the non-violent ideal society led him to the view that small decentralized, more or less self-sufficient village republics provided for India the ideal direction for future, Gandhi has, by and large, not been taken seriously on this, and yet many serious thinkers including economists of professional standing are seriously challenging the western obsession with megasystems of production and distribution in the futile game of creation and satisfaction of endless desires. Partly it is due to the growing ecological sense of the in-practicability of a mindless spending of earth's resources which is implied by the western model and also because bigness and concentration of population in huge metropolitan areas have been found to be the breeding grounds for impersonality, insensitivity, cruelty, violence and a lust to concentrate abstract power. But especially in the context of India and other developing countries some not so run of the mill economists have spelled out "the essential good sense of a third world economic policy that rejected imitation of western models; breakneck urbanization, heavy capital investments, mass production, centralized development planning, and advanced technology."[11] On the other hand, pursuing unthinkingly the path of western style headlong development, "poor countries slip, and are pushed into the adoption of production methods and consumption standards which destroy the possibilities of self-reliance and self-help. The results are unintentional neo-colonialism and hopelessness."[12] While there is a growing realization that this "ethnocentric western economics" centered around the machine and cybernated systems, beset with "the terrible simplicities of quantification must clearly be as devastating for the underdeveloped countries which import its vision of life as for the developed societies which originated it."[13] Perhaps there is need, especially in the developing countries, for careful thinking and planning keeping in view Gandhi's insights on the subject.

I. I. T., Kanpur. **S. N. Mahajan**

NOTES

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LANGUAGE AS REVELATION

Introduction :

Several years ago I was working as a cognitive psychologist on a Canada Council project aimed at founding a new field of psychological research—" epistemological psychology " as we have called it.[1] The general question upon which we focused was "How does one know ? " both philosophically and psychologically. The specific question which has continued to fascinate me is " How do we know via language ? " How do both the ordinary words of everyday conversation and the special words of scriptural revelation convey their meaning, their truth to us ? In Western philosophy, psychology, and theology, I found this study very difficult to persue because of the academic alienation which exists between these three disciplines.[2] In traditional Indian thought, however, I found that there were no brick walls between disciplines and that the question as to how language conveys and reveals word meanings had a long and respected academic parentage. In my study of Indian thought, I was guided by my former teacher, Professor T. R. V. Murti back to the ancient debate between Kumārila Bhaṭṭa the Mīmāṁsaka, and Bhartṛhari, the great Grammarian. I found myself partricularly drawn to Bhartṛhari's thinking because it spanned the diverse disciplines of philosophy, psychology and theology, and because it has been debated right up to the present day.[3] In addition it seemed to relate in a very creative way both to very ancient concepts of language, such as Plato's notion of eternally existing ideas, and to some very modern notions, such as Chomsky's image of innate universal grammatical structures.

Before going further let me pause to say a brief word about the way in which two key words " language " and " revelation " are understood in Indian Hindu or Brāhmanical thought. "*Language* " is used in a rather special sense in Hindu thought. It is always conceived of in terms of speech. Inner thought is internal speaking, and written words are literal representations of spoken speech (witness the precise phonetic nature of Sanskrit). Vāk is the faculty of speech which functions both to reveal meaning to a person and to communicate, on the basis of the meaning revealed, between persons. Vāk or speech is conceived of not only in its external form as uttered words and sentences, but also as the internal thoughts which precede and follow from such sounds. In Bhartṛhari's view vāk is seen to have a hierarchy of levels, each of which is increasingly internalized.[4] However, perhaps the most important point to note here is that the chief characteristic of language or vāk for Bhartṛhari is its inherent meaningfulness.

Revelation here refers to the function of language in its "unveiling" of reality. The basic idea here is that language or vāk is pregnant with meaning which is at first hidden, but bursts forth (*sphuṭ*) into manifestation with the help of uttered sounds. Thus all language, when correctly spoken and understood, is taken as removing the veil of human ignorance (avidyā) and revealing knowledge of reality. In modern terminology, this would be described as "general revelation" in that the whole of language is seen as pregnant with divine meaning. It is distinct from, but establishes the basis for, the more theological conceptions of "special revelation."[5] An example of special revelation in Hindu thought would be the *mahāvākyas* or great criterion sentences which are taken (by the Vedāntists particularly) as bringing out the essential meaning which is hidden in all language.[6] But to be understood, any special revelation of great scriptural sentences depends on the general capacity of language for conveying meaning, and it is precisely with this general revelation of language that Bhartṛhari's Sphoṭa theory is concerned. Let us now examine first Bhartṛhari's definition of sphoṭa, and second, the way in which this sphoṭa is said to convey word meaning, and third the levels of language which result.

I. The Definition of Sphoṭa :

Before giving a detailed definition of the sphoṭa conception, let me take a moment to sketch the metaphysical background against and out of which Bhartṛhari's thinking developed.

Metaphysical Background :

The Indian literature on the nature of language is vast. Each of the different philosophical systems has put forth its own view of language and criticized the views of others. For our present purposes let me simply indicate the positions taken in this complex debate, which covers many centuries, by a few summary sentences.[7] Indian speculations on language (vāk) began with the Veda and have continued to the present day. In the Ṛg *Veda* it is said that there are as many words as there are manifestations of Brahman.[8] The *Brāhmaṇas* and *Upaniṣads* continue to equate vāk and Brahman.[9] Murti summarizes the position well, " The Brāhmanical tradition stemming from the Veda takes language as of Divine origin (Daivī Vāk), as Spirit descending and embodying itself in phenomena, assuming various guises and disclosing its real nature to the sensitive soul ".[10] The Sāṅkhya-Yoga, Mīmāṁsā, Vedānta, the school of Grammar and Kashmir Śaivism are not only loyal to this tradition but give further systematic development to these early ' seed ' concepts, with the Grammarian Bhartṛhari producing the Sphoṭa theory.

The Sphoṭa theorists, along with the Mīmāṁsakas, hold that the revelatory power of words (*śabda*) is both divine in origin and the means by which the divine may be known. This viewpoint is opposed by the Cārvākas, the Buddhists, the Vaiśeṣikas and the Naiyāyikas who hold language to be more or less conventional in nature.[11] Just as we create names for our children or for scientific discoveries, and thereby initiate new conventions, so also the origination of all words should be understood. In this view all words are the results of convention. Arguing against this viewpoint the early Grammarians Pāṇini and Patañjali contend that words (*śabda*) and their relation with meaning are eternal, underived and impersonal.[12] Both the Mīmāṁsakas and the Grammarians adopt the view that the relation between the uttered word and its transcendent meaning is pre-established. But these two schools differ as to what aspect of speech is the primary unit that is correlated to the meaning. For the Mīmāṁsakas it is the phoneme or letter-sound (e.g. the " c " in " cow ") which is the basic given; for the Grammarians it is the totality of the word or sentence (the whole idea being conveyed) that is prior. Taken to its logical conclusion this latter view results in an ascending hierarchy of levels of speech. Since Bhartṛhari's logic is that "the whole is prior to the parts" this means that the word is subsumed by the sentence, the sentence by the paragraph, the paragraph by the chapter and the chapter by the book, and so on until all speech is identified with Brahman. From this conclusion, Bhartṛhari also makes the following deduction: There is no cognition without the words.[13] This seems to agree with the contention of at least one modern linguist, Edward Sapir, that there is no thought without language.[14] As Professor T. R. V. Murti puts it, it is not that we have a thought and then look for a word with which to express it; or that we have a lonely word which we seek to connect with a thought. "Word and thought develop together, or rather they are the expressions of one deep spiritual impulse to know and to communicate."[15] With this background in mind, let us now take a detailed look at Bhartṛhari's notion of Sphoṭa.

The Definition of Sphoṭa :

For Bhartṛhari, the word or sentence when taken as an indivisible meaning-unit is the *sphoṭa*. The technical term sphoṭa is difficult to translate into English. Sometimes the word "symbol" is used for sphoṭa, while at other times the Greek conception of logos and the Platonic notion of the innate idea have been suggested as approximating sphoṭa. In his *Sphoṭavāda*, Nāgeśa Bhaṭṭa describes sphoṭa in two ways : as that from which the meaning burts or shines forth; and as an entity which is manifested by the spoken letters or sounds.[17] The sphoṭa may thus be thought of as a kind of two-sided coin. On the one side it is manifested by the word-sound, and on the other side it simultaneously reveals the word-meaning. In a more philosophic sense, sphoṭa, may be described as the transcendent ground in which the spoken syllables and conveyed meaning find themselves united.

Perhaps an illustration may help us to grasp Bhartṛhari's notion of sphoṭa. In Western thought the whole person is sometimes referred to as having two aspects to his being, a body and a soul. Ordinarily we do not see a person as being a physical body and nothing more. So also we should not take a meaningful word to be anything more than its spoken syllables. Just as our body depends upon our inner mind and soul, so do our spoken utterrances depend upon the inner word or idea they manifest for their meaning. And just as the person is really a unity of his body and soul, so also our language is a unity of the spoken sounds and the inner idea or meaning. It is this unity of word-sound and word-meaning that Bhartṛhari calls the sphoṭa.

The process of speaking is described as follows: At first the whole word or idea exists in the mind of the speaker as a unity or sphoṭa. It is as it were an immediate intuition with, as yet, no subject-object distinction. But when the speaker utters it, he produces a sequence of different word-sounds so that what is really one—the sphoṭa or whole idea—appears to be many—all the words of the sentence or paragraph. From the listener's point of view the process is reversed. The listener, although at first hearing a series of uttered words, ultimately perceives the uttered sentence as a unity—the same unity or sphoṭa from which the speaker began—and it is then that the moment of communication between speaker and listener occurs.[18]

The inner idea or meaning-whole is unitary, but it may have as many different manifestations as there are speakers to utter it—each with his own peculiar way of putting it into words, his own speed of speaking, his own accent, etc. The external manifestation may have an infinite variety, but the inner meaning of the sphoṭa remains unchanged.

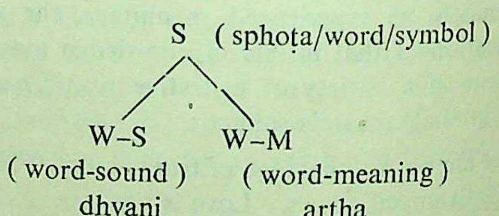
The same thing seems to hold for our experience of poetry. Let us take, for example, the word "love", which Bhartṛhari would call a sphoṭa. Although the meaning of the word love may ultimately be experienced as unitary, the verbalization and communication of that insightful knowledge may well require the employment of a variety of evocative poetic expressions—as for example, in Shakespeare's sonnet;

> Let me not to marriage of true minds
> Admit impediments. Love is not love
> Which alters when it alteration finds,
> Or bends with the remover to remove;
> O, No! it is an ever-fixed mark,
> That looks on tempests, and is never shaken;
> It is the star to every wandering bark,
> Whose worth's unknown, although his height be taken.

Love's not Time's fool, though rosy lips and cheeks
Within his bending sickle's compass come;
Love alters not with his brief hours and weeks,
But bears it out even to the edge of doom.
  If this be error and upon me pro'd,
  I never writ, not no man ever lov'd.[19]

In this sonnet, Shakespeare, through the use of his poetic imagination, composes a variety of expressions which when uttered manifest in the listener's mind an intuitive perception of the word-symbol "love" and its meaning. Different people may experience the manifestation of unitary word meaning differently. For some, it may come as a sudden flash of intuition, full-blown in its development. Others, however, may experience a gradual and progressive revelation through repeated exposures to the suggestive poetic phrases. In Bhartṛhari's theory, the word-sphoṭa "love" is a given, unitary and eternal in nature, but, as the history of literature, religion and marital relations evidences, a given requiring many gross nādas or imperfect empirical expressions before its meaning is fully grasped or intuitively realized in one's mind. In Indian aesthetics, the philosophical analysis of language in terms of the sphoṭa theory seems to have been assumed as a basic premise, and at the hands of scholars such as Abhinavagupta, Bhartṛhari's notion of word-sound or dhvani dveloped into the concept of *rasa* or poetic bliss[20].

Having illustrated the sphoṭa concept, let us now briefly restate its definition in a simple diagram :



A sphoṭa is like a two-sided coin. Its external aspect is the uttered sound or written word which is perceived by our sense organs but serves only to manifest the sphoṭa's inner aspect. The inner aspect is the expressive word meaning which inherently resides in all beings.[21]

Reason for Phenomenalization of the Sphoṭa :

If it is assumed with Bhartṛhari that the whole or sphoṭa is the basic unit of language, the question may then arise as to why this unity should ever come to be expressed in the diversity which is commonly called speech. In Bharthṛari's view, it is because the sphoṭa itself contains an inner energy (*kratu*) which, seeks to burst forth (sphuṭ) into expression. What appears to be unitary is thus seen to contain all the potentialities of multiplicity and complexity like the seed and the sprout or the egg and the chicken.[22] In the *Vākyapadīya*, Bhartṛhari suggests two ways in which the energy of speech (kratu) causes the phenomenalization of the sphoṭa. On the one hand, there is the pent-up potentiality for bursting forth residing in the sphoṭa itself, while on the other hand there is the desire of the speaker to communicate.[23] Unlike thinkers who conceive of language in conventional or utilitarian terms,[24] Bhartṛhari finds language to contain and reveal its own telos. In his metaphysical speculations, with which we are not primarily concerned, Bhartṛhari identifies this telos with Brahman who is beginningless and endless and whose essence is the word (śabdatattva). Bhartṛhari, in fact, takes his position to the logical extreme and concludes, in line with the Vedic Seers, that from speech (vāk) the creation of the whole world proceeds.

Sphoṭa Defined as Sentence (Vākya Sphoṭa)

In the above it has been made clear that Bhartṛhari conceives of all beings as born with śabda or speech already present within. As the child grows this inner sphoṭa, which potentially can be developed into any language, is transformed into the language of the particular speech-community into which the child was born. When the young child utters his first single word ejaculations, " mamma ", " dog ", " cookie ", etc. it is clear that whole ideas (as yet incompletely expressed) are being verbalized : e.g. " I want mamma ! ", " See the dog ", " Give me a cookie ! ", etc. Even when a word is used merely in the form of a substantive noun (e.g. " tree "), the verb " to be " is always understood so that what is indicated is really a complete thought (e.g. " It is tree ").[25]

Bhartṛhari observes that man does not speak in individual words. For him the chief reality in linguistic communication is the idea or meaning-whole of the indivisible sentence. Although he sometimes speaks about letters (*varṇa*) or individual words (*pada*) as meaning-bearing units (*sphoṭa*), it is clear that for Bhartṛhari the true from of the sphoṭa is the sentence.[26] Along with this emphases comes the notion that as we listen to a group of words composing a sentence, there is at some point a flash of insight or intuition (the cartoon " light-going-on " situation) in which the whole meaning of the sentence is comprehended. Bhartṛhari technically terms this experience *pratibhā*.[27] Pratibhā, in Indian thought is described as a super-normal perception which transcends the ordinary categories of time, space and causality, and has the capacity to directly " grasp " the real nature of things. The sentence is really a psychic entity, a mental symbol which in itself is the meaning. The mental perception of this meaning-whole (sphoṭa) is a case of pratibhā. Because the whole sentence meaning is inherently present in the mind of each person, it is quite possible for the pratibhā of the sphoṭa to be grasped by the listener even before the whole sentence has been uttered. More often, however, inference and reasoning may have to be applied to the words of the sentence so that the individual's cognition is brought to the level where the intuitive grasping (pratibhā) of the meaning whole (vākya-sphoṭa) becomes possible.

II. How the Sphoṭa Reveals Meaning :

The Grammarian Sphoṭa Theory as officially expounded by Bhartṛhari attracted both opponents and supporters. The chief opposition came, at a later time, from the Mīmāṁsaka Kumārila Bhaṭṭa. Kumārila's attack focused on the way in which the Sphoṭa theory conceived of word-sounds as revealing their meanings. The side of Bhartṛhari in this debate against Kumārila was taken by the skillful philosopher Maṇḍana Miśra. Maṇḍana's work entitled *Sphoṭasiddhi*, which is based on the *Vākyapadīya*, records the confrontation that takes place on this issue of how the word conveys meaning.

In the above definition of sphoṭa we have seen how Bhartṛhari maintains that the external word-sound should not be taken as the objective reality since it serves only to reveal the inner word-meaning which is both a unified whole and the true object. Illustrations have been offered to support Bhartṛhari's view that it is the whole idea which occasions sound and not vice versa. While illustrations from ordinary experience can indicate that the Sphoṭa theory is not implausible, they can hardly be taken as proof of the theory's logical possibility. The latter requires that the existence of the inner word, as distinct from its sounds, be demonstrated in terms of logical necessity and consistency. This is precisely the task undertaken by Maṇḍana Miśra in his *Sphoṭa-siddhi.*[28] Maṇḍana applies his logical analysis not only to the Sphoṭa theory but also to the alternative hypothesis put forth by Kumārila.[29] As Gaurinath Sastri observes, Kumārila was the most formidable critic of the Sphoṭa theory—later writers have offered no new criticisms but only repeat Kumārila's arguments.[30] Kumārila, arguing against Bhartṛhari, maintains that the word or śabda, whether it be the sentence or the individual word, is nothing more than a collection of a word-sounds or spoken letters, and it is with this collection alone that the word-meaning is associated. When such a collection is brought to the mind of the hearer by the sounds uttered by the speaker, the hearer understands the meaning from the sounds alone. No mystical entity such as sphoṭa, need be postulated at all.[31] According to Bhartṛhari, however, "the essence of the Sphoṭa doctrine is the idea that the word, mainly in the form of the sentence and secondarily in the form of the individual word and the phoneme [the articulated letter sound], is an entity over and above the sounds and not a mere collection of them and that it is this entity which is the bearer of the meaning."[32] This is the argument in its most general form. Since this argument goes on at great length, in true scholastic form, I have simply summarized the chief points as fallows :

Outline of Chief Points in the Argument :

Kumārila (Mīmāṁsa)	*Maṇḍana (Sphoṭa)*
1. Śabda (word) refers to phoneme as uttered.	1. Śabda refers to sphoṭa or indivisible word-whole which is a felt-fact in common experience.

Kumārila (*Mīmāṁsa*)	*Maṇḍana* (*Sphoṭa*)
2. Phonemes cause the understanding of meaning when grouped together in the form of words (pada).	2. Because of their ubiquitous and eternal nature, phonemes (as defined by Mīmāṁsakas) can only exist singly and cannot possibly co-exist as pada so as to convey meaning. This inability of the phonemes to convey meanings points to the sphoṭa as revealer of meaning.
3. Various suggestions as to how the phonemes could be grouped together so as to convey meaning :	3. Difficulties vitiating each suggestion :
(*a*) *e.g. seed.* Just as a seed will produce a new effect (sprout) when helped by other factors, so also the phonemes when combined with a group of helping factors (such as being uttered by the same person in a particular sequence) will result in the conveying of meaning.	(*a*) How can being uttered by the same person in a particular sequence make the discrete phonemes c-o-w into a word when each letter vanishes completely before the subsequent one is uttered?
(*b*) *via saṁskāras.* Phonemes leave memory traces so that the traces of the earlier phonemes together with the utterance of the last phoneme conveys the meaning.	(*b*) Saṁskāras, like their original individual phonemes, have only discrete existences vanishing completely before subsequent ones come into existence—therefore no possibility for grouping into word or conveying meaning exists.

(*c*) *via apūrva.* Phonemes leave impressions different from the ones which cause remembrance, and are like apūrva in a sacrifice, where the unified result is different in nature from the individual causes (parts of the sacrifice). When spoken by a single person in a determinate order the apūrva of the phonemes inhere in the self so that when the last phoneme is uttered the śabda is understood and its meaning conveyed.	(*c*) Analogy from the apūrva of religious merit (which is based on an inference from scripture so as to validate the moral law) to the saṁskāras of phonemes rendering them capable of conveying meaning is unjustifiable. Rather it is, the case that the ordinary memory traces of the phonemes reveal the already existing inherent sphoṭa which provides awareness of the whole and determines the order of the phonemes.
4. In the above view 3 (c) only one new thing (i.e. the special apūrva-like power) need be postulated, whereas Maṇḍana postulates two or three new things—a special saṁskāra and a sphoṭa (and a special power of that sphoṭa—conveying of meaning).	4. Only new thing postulated is sphoṭa itself and even that need not be postulated since it is directly perceptible. Saṁskāra referred to is the common memory trace which has the same object as that of the uttered phoneme (i.e. the sphoṭa). The unified sphoṭa was the original cause of the phoneme and is the end-object of both it and its saṁskāra. Thus, no special or illogical power, such as apūrva is postulated.

In this logical argument, it seems clear that Kumārila's attempt to identify śabda with the uttered phoneme is effectively discredited by the reasoning of Maṇḍana, who at the same time has vindicated Bhartṛhari's Sphoṭa theory.

Having supported Bhartṛhari's theory on logical grounds, Maṇḍana now gives a detailed analysis of the process by which the sphoṭa is cognized. If this analysis is to support the above logical argument it must show: (1) how the sphoṭa may be comprehended using only the ordinary memory traces of the phonemes, and (2) that the sphoṭa is a perceivable entity and not a mere postulation. The process by which the sphoṭa is cognized is stated by Maṇḍana in his commentary on sūtra 18 of the *Sphoṭasiddhi* as follows. Each spoken sound or letter potentially reveals the whole of the sphoṭa, which is already latent in the listener's mind. However, the first letter of the word, only dimly begins to evoke that whole meaning in our awareness. The subsequent letters are needed to produce a clear cognition of the whole word. Upon hearing of the last letter (e.g. "w") along with the memory traces of the previous letters (e.g. "c" and "o"), the complete word (e.g. "cow") stands revealed in a unitary intuition or pratibhā.[33] Maṇḍana offers the analogy of a jeweller who examines the genuineness of a precious stone. His continuous gaze is really a series of cognitions, each of which perceives the genuineness of the stone but with increasing clarity. Each cognition leaves its saṁskāra or common memory trace. The last cognition, helped by the saṁskāra of the previous ones, fully perceives the genuineness of the stone but for the saṁskāras of the intervening cognitions, there would be no difference between the last one and the first one. An important point is that the jeweller is described as "expert", meaning that before beginning the examination he already had the image of a precious stone ingrained in his subconscious, and it was this image (like the inhering sphoṭa) which was revealed to the jeweller's mind by his series of partial perceptions.

Another example offered by Maṇḍana describes how from a distance one (if one is in India) may mistake a tree for an elephant. But if one keeps on looking at it, the tree is ultimately recognized in its true form. In this situation the truth has been arrived at through a series of errors. The sense organ (in this case the eye) has been in contact with the tree throughout. The errors of perception have had the tree as their object, but the cognitions produced by the eye have had an elephant as their form. When, however, the final or true cognition takes place, it has the form of the tree itself and is one with its object. But this true cognition has been arrived at by going through the series of erroneous perceptions that preceded it. Now this change from error to true perception cannot be explained by factors such as change in distance, since simply standing on the same spot and gazing with intense concentration often produces the described result. According to Maṇḍana, "it is the previous cognitions (having tree as the object and the form of the elephant) leaving progressively clearer residual impressions, which become the cause of the clear perception of the tree".[34] There could have been no erroneous cognition of elephant had the tree not been there as an object for the sense organ to come into contact with in the first place. The error, therefore, may be described as misapprehension or vague perception. In the context of our discussion about words, the sphoṭa is similarly said to be the object of the cognition of each of the phonemes and yet it at first appears in the form of the phoneme. But through the the additional cognitions of the subsequent phonemes, the sphoṭa is seen with increasing clarity until with the uttering of the final phoneme the form of the phonemes has become identical with that of the sphoṭa. Here the phonemes are seen in a position which at first glance seems parallel to the snake in the famous rope-snake illusion of the Advaita Vedāntins. The perception of the rope as snake is error, but it is through the negating of the erroneous snake-perception that the true rope-perception is finally realized. And were it not for the prior existence of the rope, the erroneous perception would have lacked the necessary ground for its phenomenal existence. Similarly, in this case, the phonemes are seen as dependent upon the sphoṭa for their phenomenal existence but in that phenomenal existence as being the means by which the noumenal sphoṭa may be perceived. This apparent parallelism, however, does not hold up under closer analysis. The Advaita theory provides for only true or false cognitions and allows no progressive approximation to the real, as is the case in a series of erroneous sphoṭa perceptions. Whereas the Advaitin describes his error as being transcended via a single negation (e.g. as when it is realized "this is not snake"), the Grammarian holds that his error (e.g., the vagueness of the perception of the whole in the first phoneme) is positively overcome by the increasingly clear perception of the sphoṭa which the succeeding phonemes reveal. This analysis of how error is overcome would seem to give weight to G. Sastri's suggestion, that in some ways the doctrine of reflection (ābhāsa) of the Kashmir Trika writers may provide the closest parallel to Sphoṭa theory. In the Kashmir Trika view consciousness (*caitanya*) is the only reality, and all external manifestation is held to be a reflection on consciousness as on a mirror. Error, in this view, occurs not because the initial perception has no existence, but because its reflection of the object captures or includes only a part of its totality and adds in other material (saṁskāras) taken from the old stock of memory. This error is positively transcended as the form of the reflection is progressively purified of memory material until it perfectly reflects the object. This perfect reflection, which is true knowledge, is further described as a union of the subjective and objective aspects of consciousness—a return to the oneness which is its essential nature.[35] From this brief glance at the Kashmir ābhāsa theory it would seem to provide a helpful parallel supporting the Sphoṭa view of the way in which the manifest phonemes erroneously but positively approximate their true object, the sphoṭa itself.

Returning to Maṇḍana, his explanation of the paradox as to how the indivisible sphoṭa appears as the phonemes, and the phonemes as the parts of the partless sphoṭa is as follows. He says it is the sounds that resemble one another which are the cause of both the error and the final correct cognition of the sphoṭa. If, for the manifestation of two different word–sphoṭas, one has to make similar movements of the vocal organs, the phonemes produced by these movements appear to be parts of both of the indivisible words.[36] This is an error which is fostered by the construction of such artificial devices as alphabet letters or word syllables, usually for teaching purposes. It is precisely because of this kind of confusion, says Maṇḍana, that sentences, words, and phonemes appear to have parts whereas in reality they have none.[37] The obverse of this applies to the sphoṭa. From the phenomenal viewpoint the sphoṭa "cow", for example, may appear to possess qualities such as accent, speed, loudness, time, place, and person in its utterance. That these are qualities of the phenomenal sounds and not the noumenal sphoṭa is what makes possible the common recognition of the word cow in spite of its diversity of utterance. From the Sphoṭa viewpoint, it is this noumenal grounding or basis that makes possible such things as the translation of thought from one phenomenal language to another.

III. Sphoṭa in Relation to the Levels of Language :

In the above discussion it is clear that, from the Sphoṭa viewpoint, language may be seen to operate on at least two levels. On one level there is pratibhā or the intuitive flash-like understanding of the sentence-meaning as a whole. On the other level there are the uttered words of the sentence. Bhartṛhari calls the latter *vaikharī vāk* (overt or elaborated speech), while the former is aptly designated as *paśyantī vāk* (speech which through pratibhā sees or perceives reality).[38] Between these two levels, says Bhartṛhari, there is a middle or *madhyamā vāk* corresponding to the vākya sphoṭa in its mental separation into sentence-meaning and a sequence of manifesting word-sounds, none of which have yet been uttered. According to Bhartṛhari, these are the three levels of language through which vāk passes whenever one speaks. Vāk, which is at first quite internal, is gradually externalized for the purpose of communication.[39] In this way Bhartṛhari accounts for all cognition as being necessarily identified with language, since these levels of language span the complete continuum of cognition.

Let us now briefly examine each level in somewhat more detail.[40] Vaikharī is the most external and differentiated level in which vāk is commonly uttered by the speaker and heard by the hearer. It is prāṇa or breath that enables the organs of articulation and hearing to produce and perceive sounds in a temporal sequence. Prāṇa may, therefore, be taken as the instrumental cause of vaikharī vāk. The chief characteristic of vaikharī vāk is that it has a fully developed temporal sequence. At this level individual peculiarities of the speaker (e.g. accent) are present along with the linguistically relevant parts of speech. Going further inwards, as it were, madhyamā vāk is the next level and its association is chiefly with the mind or intellect (buddhi). It is the idea or series of words as conceived by the mind after hearing or before speaking out. It may be thought of as inward speech. All the parts of speech that are linguistically relevant to the sentence are present here in a latent form. At this level a variety of manifestation is possible. The same sphoṭa or meaning is capable of being revealed by a variety of forms of madhyamā, depending on the language adopted. Although there is no full temporal sequence of the kind experienced in sploken words, word and meaning are still distinct and word order is present. Therefore, temporal sequence must also be present along with its instrumental cause prāṇa. The next and innermost stage is paśyantī vāk. Paśyantī is the direct experience of the vākya-sphoṭa—of meaning as a noumenal whole. At this level there is no distinction between the word and the meaning and there is no temporal sequence. All such phenomenal differentiations drop away with the intuition of the pure meaning in itself. Yet there is present at this level a kind of "going-out" or desire for expression. This is the pratibhā "instinct", referred to above, which in one sense may be said to motivate the phenomenalization into sentences and words of the paśyantī vision, so that communication may occur. Thus the Vedic vision or dhī of the ṛṣi, which in itself is paśyantī, becomes phenomenalized so that by its uttered word men might rise above their ignorance and be grasped in their cognition by the revelation of ultimate reality. Therefore, there is a sense in which Veda and pratibhā are identified as paśyantī vāk. Since paśyantī is, by definition, beyond the level of differentiated cognition, it is impossible to define it in word-sentences. It is at the level of direct intuition and therefore must finally be understood through experience.

For Bhartṛhari the very ontological reality of vāk throughout its various levels also amounts to a description of the path by which mokṣa (ultimate freedom from ignorance) may be attained. In *Vākyapadīya* I : 14, we read, "It (Grammar) is the door to salvation, the remedy for all the impurities of speech the purifier of all the sciences and shines in every branch of knowledge".[41] The vṛtti following makes clear that use of corrupt forms of vāk is a cause of sin, and that the correct use of vāk not only reveals all knowledge, but at the same time, results in the acquiring of special merit through which one may become united with Śabdabrahman and eventually, by repeated repetition of this union, mokṣa is finally achieved. It is at the level of paśyantī vāk or pratibhā that such union, productive of mokṣa, is depicted. Iyer describes such a practice as *śabda-*

pārvayoga or *vāgyoga* which he defines as a kind of meditation aimed at raising consciousness to the highest level of vāk.[42] Absence of differentiation or time sequence within the vākya-sphoṭa is held to be characteristic of this meditation. Iyer finds the required discipline described in the vṛtti on *Vākapadīya* I : 123 which he translates as follows :

> Taking his stand on the essence of the Word lying beyond the activity of breath (prāṇa), resting in one's self with all sequence eliminated,
>
> After having purified speech and after having rested it on the mind, after having broken its bonds and made it bond-free, after having reached the inner Light, he, with nis knots cut, becomes united with the Supreme-Light.[43]

Although Bhartṛhari is emphatic that the study of the correct use and meaning of vāk is a means of attaining mokṣa, he does not describe the different stages of that spiritual ascent. As Iyer points out, Bhartṛhari seems to do little more than to observe the levels of vāk, particularly the vaikharī, madhyamā and paśyantī, and indirectly suggest that they are somehow connected with the processes of ascent to mokṣa.[44]

IV. Concluding Summary and Suggested Relevance for the Current Language Debate :

As a result of the above analysis, the following summary is offered of the major tenents in Bhartṛhari's Sphoṭa theory.

A. The primary unit of language is the sphoṭa or meaning-whole; its physical manifestation as a series of uttered words or phonemes is secondary.

(1) An uttered word or phoneme has no independent existence apart from the meaning-whole of which it is a part, i.e. the sentence (vākya-sphoṭa).

(2) The two aspects of word-sound (dhvani) and word-meaning (artha), differentiated in the mind (buddhi) and yet integrated like two sides of the same coin, constitute the sphoṭa.

(3) The primary meaning-whole or sphoṭa phenomenalizes into parts (i.e. padas or words and phonemes) becuase there is a potentiality to burst forth into disclosure

(sphuṭ) within the sphoṭa (self-revelation is the telos of language and consciousness). To put it another way, there is an inherent desire within the individual self to communicate—speech has an instinctive basis.

B. Meaning is communicated not by the summation of phonemes/padas or their special apūrva like powers, but by the progressive revelation of the inherent vākya-sphoṭa as the phonemes/padas are uttered.

(1) Sphoṭa is an *a priori* meaning whole, which is fully perceived in the mind of the speaker before he begins to speak, and is latent in the minds of all hearers. The uttered sounds serve only to manifest to the hearer the sphoṭa which is already latent in his consciousness, and which is identical with the speaker's initial sphoṭa.

(2) The manifesting of the sphoṭa in the cognition of the hearer is a process of perception, rather than inference. This process is characterised as a series of progressively clearer perceptions, the first having the highest degree of error, the last having no error at all.

(*a*) There are levels of language characterized by different degrees of phenomenalization of the sphoṭa.

(1) At the lower levels of vaikharī and madhyamā, the sphoṭa is limited by the function of time sequence which occurs in conjunction with prāṇa, and results in ordinary verbal cognition—overt speech and mental thought.

(2) At the higher level of paśyantī, ordinary verbal cognition is transcended and the noumenal meaning of the vākya-sphoṭa bursts forth in a flash of intuition or pratibhā.

Relevance of Sphoṭa Theory for Contemporary Language Debate:

Although no attempt is made here to review the vast Western discussion of the nature of language, it is perhaps appropriate to note that a nineteenth and early twentieth century renewal of interst in language in the West was influenced by scholars such as Von Humboldt,[45] Max Mullar,[46] and Cassirer,[47] all of whom gave considerable attention to Indian language and religion in terms of recent philosophy, the Sphoṭa theory of Bhartṛhari is seen to directly challenge some contemporary Western philosophers and their analysis of language in terms of empirical factuality and linguistic game theory.[48]

Among contemporary cognitive psychologists, the finding of Werner and Kaplan that both phonemes and material objects seem to possess an inherent expressiveness, and that this expressiveness is somehow basic to word meaning[49]—this finding is suggestive of the Brāhmanical view that langugage (vāk) is inherently meaningful. In his recent book, *Biology and Knowledge*, Jean Piaget suggests that knowledge results from a process of assimilation of sensory stimuli from the lower specialized sensory organs to the higher functions of the nervous system in accordance with a known autoregulatory cognitive model.[50] This would seem to support the Sphoṭa interpretation of hearing as an integrative process in which the phonemes are perceived as meaningful due to the cognitive structuring they are given by the sphoṭa. This parallel is further supported when Piaget notes that such an autoregulatory cognitive mechanism appears as a whole which is conserved throughout a series of transformations (in both the individuation and assimilation directions).[51] Piaget, of course, rejects the Sphoṭa claim that the knowledge model is innate, but admits the necessity for some kind of autoregulatory knowledge mechanism and recognizes the infinite regression which results when the *a priori* existence of such a mechanism (e.g. sphoṭa) is not admitted.[52] This assumption of the whole as *a priori* is also accepted by O. H. Mowrer when he suggests a human infant becomes able to say or hear a word by virtue of the fact that " he already ' knows ' what it sounds like and can practice the response against the model which already exists (in memory or ' imagination ') ".[53] The neurophysiological analysis of speech and brain mechanisms by Wilder Penfield also concludes with an integrative model which is similar to the Sphoṭa theory. Penfield finds that the speech mechanism consists of two integrated halves. There is a " sound unit ", a " conceptual unit " and an integrative connection between the two.[54] As is the case with the Sphoṭa analysis, Penfield finds that the conceptual unit seems to provide the neural integration for the speech unit. Penfield suggests that there is " conceptual storehouse " of such integrative speech mechanisms existing in the brain, but cautions that neither the place of storing nor the manner of their activation is understood.[55] Understanding of meaning occurs, he says, when the sound unit and the conceptual unit are established together with their interconnections. In Penfiled's theorizing the "conceptual unit" alone would seem equivalent to Bhartṛhari's artha, the "sound unit" to dhvani, and the "mental storehouse of authomatically integrated conceptual units" to the sphoṭas. But Penfield, along with most other Western thinkers, does not seem to have any notion that such an integrated conceptual unit or sphoṭa could be an object capable of inner perception or pratibhā.

The idea that there must necessarily be some kind of centra structuring mechanism which integrates incoming stimuli is also found in the recent Western discussion centered around Noam Chomsky's notion of universal grammatical structures as being innate withing the mind.[56] However, Chomsky (along with the other contemporary Western scholars discussed above) appears to differ significantly from the sphoṭa view in that whereas his central structures seem to be neutral—in terms of meaning content—the sphoṭa is conceived of as being the very essence of meaning. From the Sphoṭa viewpoint the pertinent question for modern Western scholars such as Chomsky, would be, "How can you have a non-meaningful or neutral structure when the very function of structuring or programming incoming stimuli necessarily assumes the pre-existence of meaning—otherwise would not the structuring occur on the basis of pure chance?" As is the case with a computer programme, the organizing programme or structure must itself possess a meaning logic, which is the essential element enabling the incoming stimuli to be processed into a meaningful results.

From this brief discussion it seems evident: (1) that there are key points of conceptual contact between East and West on the question "How do words convey and reveal meaning?"; (2) that the Sphoṭa theory has sufficient logical consistency and reasonableness (in terms of ordinary experience) to enter into debate with current Western positivistic notions of language; and (3) that the Sphoṭa theory can creatively challenge contemporary Western psychological notions of *neutral* speech structuring mechanisms. This dialogue between East and West promises to be exciting and to involve issues of real significance in relation to language and revelation.

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NOTES

1. This research was conducted by a team of psychologists at *The Centre for Advanced Study In Theoretical Psychology*, University of Alberta.

2. This work on the Western side still continues with the first publication soon to appear : Royce, J. R., Kessel, F. L., Coward, H., Egan, E., and Mos, L. *Epistemological Psychology : A Critical Review*, 1975.

3. See, for example, the recent books : K.A.S. Iyer, *Bhartṛhari*; and K. Kunhan Raja, *Indian Theories of Meaning*.

4. *The Vākyapadīya of Bhartṛhari*, I : 142, trans. by K. A. Subramania Iyear. Poona : Deccan College, 1965.

5. *A Handbook of Christian Theology*, ed. by M. Halverson and A. Choen. New York : World Pub. Co., 1958, " Revelation ", pp. 327-328.

6. K. S. Murty, *Reason and Revelation in Advaita Vedānta*. New York : Columbia University Press, 1959, pp. 88–98.

7. I have given a detailed survey of these positions in my as yet unpublished book entitled : *Sphoṭa Theory : A Philosophical and Psychological Analysis*, Cp. 2.

8. *R. V.* 5.10.2 and 10.114.8.

9. As the Sāṅkhya Āraṇyaka puts it, " The whole speech is Brahman". (3.3) Various symbols are used to indicate the divine nature of speech and its evolution to form creation, e. g. Prajāpati and vāk are viewed as male and female copulating to create the world. *(Katha. Br.)*.

10. T. R. V. Murti, *Some Thoughts on the Indian Philosophy of Language*. Presidential Address to the 37th Indian Philosophical Congress, 1963, p. viii.

11. S. C. Chatterjee, *The Nyāya Theory of Knowledge*. Calcutta : University of Calcutta, 1965, pp. 319–321.

12. Not only is there no record of the establishment of an arbitrary convention, says Professor Murti, but the very idea of convention itself presupposes language. "To make conventions, words have to be used and understood by the persons participating in the convention. This is clearly circular. Invoking God does not help either. How could God make known his intentions, his conventions between words and their respective meanings to persons who did not use language already?" T. V. R. Murti, *op. cit.*, p. 12.

13. *Vākyapadīya*, I : 123. Related to this point is the Grammarian's rejection of gestures as vehicles for communicating meaning. As Punyarāja puts it, the shaking of the head indicating negation does not communicate independent of words. The gesture serves to make one think of the word "no" before it can communicate the meaning of negation or refusal. P. K. Chakravarti, *The Linguistic Speculations of the Hindus*. Calcutta : University of Calcutta, 1933, p. 72.

14. Edward Sapir, *Language*, New York : Harcourt, Brace and World-Inc., 1949, p. 15.

15. T. R. V. Murti, *op. cit.* p. 3.

16. Gaurinath Sastri, *The Philosophy of Word and Meaning*, Calcutta : Sanskrit College, 1959, pp. 102–103.

17. Nāgeśa Bhaṭṭa *Sphoṭavāda*. Madras : The Adyar Library. 1946, p. 5.

18. *Vākyapadīya*, I : 44–46.

19. William Shakespeare, *The Works of William Shakespeare*. London Frederick Warne and Co., 1893, Sonnet §116, p. 1110.

20. For a convincing demonstration of this contention, see Tarapada Chakrabarti, *Indian Aesthetics and the Science of Language*. Calcutta : Sanskrit Pustak Bhandar, 1971.

21. The above diagram is a modified version of the one presented by D. M. Datta, *The Six Ways of Knowing*. Calcutta : University of Calcutta 1960, p. 257.

22. *Vākyapadīya*, *op. cit.*, vṛtti, on I : 51, p. 58.

23. *Ibid.*, I : 1 vṛtti, p. 1.

24. For example, the early Buddhists, the Cārvākas, or in modern thought the Positivists.

25. *Vākyapadīya*, *op. cit.*, vṛtti on I : 24–26, p. 31.

26. *Ibid.*, see especially the *Second Kāṇḍa* in which he establishes the vākya-sphoṭa over against the view of the Mīmāṁsakas.

27. *The Vākyapadīya*, ed. and trans. by K. R. Pillai. Delhi : Motilal Banarsidass, 1971, II : 153 ff., pp. 72-73.

28. *Sphoṭasiddhi of Maṇḍana Miśra*, English trans. by K. A. Subramaina Iyer. Poona : Deccan College, 1966.

29. *Ibid.*, sūtra 6, p. 16.

30. *The philosophy of Word and Meaning*, *op. cit.*, p. 103.

31. *Ślokavārtika, op. cit.*, Sūtra V. Section 12, pp. 261–268. It is of interest to note here that Śankara offers essentially the same argument against the Sphoṭa Theory. See Śaṅkara's Bhaṣya on the *Brahma Sūtras* 1.3.28.

32. K. A. Subramania Iyer, " Introduction " to *Sphoṭasiddhi, op. cit.*, p. 3.

33. *Sphoṭasiddhi*, sūtra 18, p. 44.

34. *Ibid.*, sūtra 19. Similar arguments are offered to show how the progressively clearer perception cannot be attributed to defects of the senses or memory through resemblance, p. 49.

35. K. C. Pandey, *Abhinavagupta*. Varanasi : Chowkhamba Sanskrit Series, 2nd ed., 1963, the ābhāsa theory is summarized on pp. 400–427.

36. *Sphoṭaeiddhi, op oit*, sūtra 20, pp. 51–52; and *Vākyapadīya*, I : 88, " Vṛtti ".

37. *Ibid.*

38. *Vākyapadīya, op. cit.*, I : 142.

39. *Bhartṛhari, op. cit.*, p. 144.

40. The following summary depends mainly upon Iyer's presentation of Bhartṛhari's position in *Bhartṛhari, ibid*, pp. 144–146.

41. Iyer's translation, *op. cit.*, p. 21.

42. *Bharirhari, op. cit* p. 145.

43. *Ibid.*

44. *Ibid.*, p. 404.

45. See, for e. g. Cp. 13, "The Word Unit : The Incorporative Capacity of Language " in Wilhelm von Humboldt's *Linguistic Variability and Intellectual Development*, trans. by G. C. Buck and F. A. Raven, Florida : University of Miami Press, 1971 (Orig. German Pub. 1836).

45. K. M. Max Muller, *Lectures on the Science of Language*, Delhi : Munski Ram Manchar Lal (1861), reprint 1965.

47. E. Cassirer, *Language and Myth*. New York : Dover Pub. Inc., English trans. by S. Langer, 1946. This work, which evidences considerable influence from the Brāhmanical concept of speech (vāk), formed the basis for much of the thinking upon which Cassirer's *Philosophy of Symbolic Forms* depends. (See " Translator's Preface ", p. vii ff.).

48. See, for example, the view of L. Wittgenstein, *Tractatus Logico-Philosophicus*, London : Routledge and Kegan Paul, 1963.

49. H. Werner and B. Kaplan, *Symbol Formation*, New York : John Wiley and Sons, 1963.

50. J. Piaget, *Biology and Knowledge*, Edinburgh University Press, 1971, pp. 36–37.

51. *Ibid.*, p. 35.

52. Loc cit.

53. O. H. Morer, *Learning Theory and the Symbolic Processes*. New York : John Wiley and Sons, 1960, p. 277.

54. W, Penfield and L. Roberts, *Speech and Brain Mechanisms*. Princeton : Princton University Press, 1959, p. 246.

55. *Ibid.*, p. 233.

56. Noam Chomsky, *Language and Mind*. New York : Harcourt, Brace and World, 1968, p. 76.

ŚAṄKARA'S CONCEPT OF ADHYĀSA : A TEXTUAL INTERPRETATION

The concept of 'adhyāsa' furnishes the one single clue to the understanding of the Advaita Vedānta of Śaṅkar. This is evidently the reason why Śaṅkara in his commentary on the Brahmasūtras begins with an analysis of the concept, [why the portion of the text known as 'Adhyāsabhāṣya' forms the prelude to Śaṅkara's Brahmasūtra-bhāṣya, otherwise called Śārīraka mīmāṁsā]. Tradition has attached the greatest importance to it, and the two schools of Advaita Vedānta, commonly known as the Vivaraṇa and the Bhāmati schools, have bestowed upon it most cautious attention, and generations of adherents of both the schools have elaborately commented and reviewed upon it. In fact, most of the later writers, instead of presenting glossaries impartially on the entire text of Śaṅkara's Brahmasūtra-bhāṣya, have, in their selective approach, been rather over-thorough in their analysis of Śaṅkara's concept of 'adhyāsa' since they considered it as most vital for the philosophy of the Advaita. [Even in our own times, a galaxy of renouned scholars and great masters in the subject, like Profs. S. Radhakirshnan, K. C. Bhattacharyya, M. Hiriyanna and Drs. S. N. Dasgupta, Belvalkar and a host of others have very carefully reviewed the significance of the concept in the context of Śaṅkara's philosophy.] It becomes, therefore, a matter of shock and surprise when we are told that 'this chapter which is most important in his entire Brahmasūtrabhāṣya has been utterly misunderstood' and is given 'a cursory treatment by his commentators'.[1] It is possible that the person responsible for this over-bold pronouncement regards all treatments, however, elaborate and lengthy, as cursory, if in them the fundamental issue, raised and discussed, is, as he claims, 'utterly misunderstood'. And, it may also be that the proposition 'all classical treatment on the issue is cursory since in it the issue is utterly misunderstood' is intended to be taken as covertly analytical—no treatment of the concept of 'adhyāsa' can be regarded as enlightened and thorough if it does not fall in line with or veer round the one indisputable interpretation furnished at long last by this new commentator of Śaṅkara.

The charges against the traditional interpretation of Śaṅkara's concept of 'adhyāsa' have been made in the following way. 'Tradition has understood *adhyāsa* as a psychological concept. In this interpretation, *adhyāsa* stands for an eternal process of psychological illusion in which all men get necessarily involved. But here I feel it my duty to point out that Śaṅkara is not giving any account of illusion at all..... This chapter deals with a philosophy of language and not with an account of psychological illusion. In this chapter, Śaṅkara tries to give a critique of language which leads him to the conclusion that language necessarily falsifies the reality it purports to represent.'[2] Also, 'Tradition in rendering Adhyāsa as superimposition is carried away by the example used in the Vedānta literature of shell-silver or rope-snake illusion. But Śaṅkara and his contemporaries have used these examples as illustrative of a logical point and nothing else. They are not discussing it at the factual level but by way of illustrating what they mean by logical error'.[3] In this, then, some unnamed contemporaries of Saṅkara are credited with seeing, the 'logical point' in the concept of 'adhyāsa' and grasping it as logical error, and to that extent, they are absolved from the charge of misunderstanding Śaṅkara and his adhyāsabhāṣya. The 'logical point' which (according to the new Theorist) tradition has missed in its cursory treatment of Śaṅkasa's adhyāsabhāṣya and the mistake it committed thereby was first brought out in the Analytical Studies[4], among a host of other mistakes supposed to have been committed by it, such as, regarding śabdapramāṇa (which is really a critique of language[5]) as an extraordinary *pramāṇa* of scriptural revelation and thereby wrongly limiting the scope of logical reason. In a recently published paper[6], this logical point has been more clearly brought out, elaborated and critically reviewed. It is this that the doctrine of Adhyāsa is a logical doctrine and not a psychological one. The error that is discussed here is logical and not psychological. In this logical doctrine, Śaṅkara wishes to point out that the logical subject and the logical predicate belong to two different categories with distinct and opposite characteristics and their coupling in propositional symbolism is logically unsound. Ignorance of the category difference between the two leads to this kind of coupling in propositional form.[7] Furthermore, " all propositions including those which are counted as true and those which are counted as false at the factual level are based on a logical error which Śaṅkara names as Adhyāsa. Adhyāsa in the context of Śaṅkara Vedānta stands for the logical error of coupling two different elements of thought with categorial differences of fundamental type in case of all predication involving an ascription of either a sortal or a characterising universal to a particular which is its locus."[8] Why a factually true predicative or descriptive statement should be taken as logically errorneous according to Śaṅkara is explained in the Analytical Studies as follows : . . . . 'any attempt of classifying or describing necessarily carries with it the logical prossibility of misclassifying and misdescribing. When I describe a thing as a snake, my statement is open to the logical possibility of falsification and even on the basis of a correcting cognition when I describe the thing as a rope the possibility of my description being falsified is not ruled out. On account of this logical possibility of error, all the descriptive statements are initially vitiated. So any language which employs class-concepts (and no language can do without) carries with it the logical possibility of falsification ".[9] This logical point in Śaṅkara's notion of 'Adhyāsa', unpardonably missed by Śaṅkara's traditional commentators, has been clarified further for our benefit.' " Every judgement, therefore, while judging a thing to be of a sort carries the possibility of having misjudged it. This statement only signifies that universals are of a free floating character and that since they are capable of being applied to different instances on different occasions they are capable of being applied both rightly and wrongly. In other words, this statement signifies that predicates in our language are not straight jackets.... This statement (supposedly Śaṅkasa's own ?) by no stretch of imagination can be construed to assert that there is only one thing, i.e. a Brahman whereas we, the human mortals of the earth are in a perpetual state of illusion falsely believing that there are many things when actually there is only one thing on earth ".[10] The severity of the language used here in the last sentence leaves one gaping in the process of guessing if the fling is intended to be at Śaṅkara by Śaṅkara himself or at his 'traditional' commentators by the new commentator !

In spite of the vehemence with which the 'logical point' (or feature) of Śaṅkara's concept of 'adhyāsa' has been explained so far by our new commentator on Saṅkara's Adhyāsabhāṣya, several points in that logical theory of 'adhyāsa', still remain unclear. It is, of course, clear that 'adhyāsa' in this new version is not to mean illicit or wrong superimposition as traditionally held. It is not also to mean a 'fact' of experience since as a genuine philosopher Śaṅkara can only deal with a logical and linguistic question and not with any factual question at all.[11] Again, not being a psychological concept, 'adhyāsa' is not to mean an 'error of experience', or as it is wrongly held and defended by Tradition, 'a *positive* ignorance' presenting a distorted view of things occasioned by some adventitious defect (*āgantuku doṣa*). It is not also to be taken as mistaking one thing for another which latter is characterised by an absolute negation of the other. It is also very much clear that according to this new version of Śaṅkara's adhyāsa, 'adhyāsa' does not have anything to do with the psychological processes and events connected with such phenomena as, misperception, illusion or misconception. On the positive side, it is clear also that, according to the new view, 'adhyāsa' of Śaṅkara's meaning stands for the faulty logical process, involved in all descriptive statements, of 'coupling' or combining two ideas which as the 'logical subject' and the 'logical predicate' belong to two radically distinct 'types' and are, therefore, 'categorially' different.[12] It is also clear that, according to this new thesis on Śaṅkara vedānta generally and on Śaṅkara's Adhyāsabhāṣya in particular, the confusion, ignorance or *avidyā* that Śaṅkara complains of, is the logical error involved in propositional symbolism when we 'couple' two distinct ideas together as subject and predicate in descriptive statements which cannot be *ex hypothesi* so herded together.[13] The points which are not sufficiently clear are: in the first place, if it is being used as the *logical subject* and the *logical predicate* that makes these ideas, categorially distinct and even opposed, or one of them being a unique individual and the other in so far as it is a *jāti*, a class-idea or a class-characteristic, or both. If the first alternative is taken, it remains to be explained: how in being used as the logical subject and the logical predicate ideas can come to acquire such distinctive and uncompromising character and status which makes their 'coupling' in judgement logically unwarranted since it is through this coupling or combination alone that they can come to derive their nature as the 'logical subject' and 'predicate'[14]. On the second alternative since the so called unique individual or particular having unique reference, and the *jāti*, the class-idea or class-characeristic, described as a loose jacket, a free floating idea with non-specific or indifferent reference can be regarded in such ways only when they are considered in themselves and outside a relational context, it is not clear why inside a judgemental relation they should be understood as distinctive and radically distinct as heretofore, rendering the judgement in which they are now found logically false[15]. If the third alternative is to be accepted, and according to the new thesis Śaṅkara's concept of 'adhyāsa' as a logical concept is to be taken to mean the 'coupling' or combining a particular or an individual as a 'logical subject with a sortal or characterising universal taken as logical predicate, quite a number of fresh questions arise. Firstly, is it correct to say, as has been said by this new interpreter of Śaṅkara's adhyāsa', that 'in every proposition, a particular is collected under a universal either of of the sortal type or of a characterising type as 'this is a rope' or 'this is strong'[16]. Again, does not the statement made in another place that 'the logical error to which he draws our attention and which is involved in every case of predication is due to our ignorance of fundamental difference between two logical categories of the logical subject and the logical predicate : the particular and the universal'[17] go to suggest that every predicative and descriptive judgment is irrevocably singular and monadic ? Is this description of 'all' descriptive statements correct ? If not, is this error of omission also to be attributed to Śaṅkara ?

The difficulty in the acceptance of the third alternative explanation of Śaṅkara's linguistic theory of 'Adyāsa' given above has been that while adumbrating this theory in his Analytical Studies this new interpretor gave us to understand that Śaṅkara's concept of 'adhyāsa' is a whole-sale condemnation of all linguistic expressions. Thus he says, 'since no linguistic expressions are possible without joining ideas which are distinct and different, language by its very nature necessarily falsifies, and is not a fit instrument for delivering the truth'[18]. The title of this paper published in the quarterly---'Śaṅkara's doctrine of Adhyāsa : Difficulties of propositional symbolism' also goes to suggest that Śaṅkara's theory of 'adhyāsa' is illustrated in propositional construction *generally* and so whatever ideas are 'coupled' in propositions are logically incompatible and cannot be connected without violence to the principles of logic of his understanding and acceptance. So, the limitation of 'adhyāsa' to propositions involving an individual or a particular as the logical subject and a sortal or characterising universal as the logical predicate seems to fall short of whole-sale condemnation of '*all* linguistic expressions' which was the previous target.

Secondly, what are we to understand by the expression 'coupling' when it is said that the coupling of the logical subject, a unique individual, and the logical predicate, a free-floating universal, in propositional symbolism, is logically unsound, and that this is 'adhyāsa' of Śaṅkara's meaning? To be sure, the word 'coupling' is intended to be the English equivalent of Śaṅkara's 'mithunīkṛtya' and our interpreter is so fascinated by it that he almost invariably uses it to singify propositional relation between the subject and the predicate. What Śaṅkara himself means by 'mithunīkṛtya' will be explained in the context of Śaṅkara's text later on. We shall, at this stage, try to see what difficulties this innovator of Śaṅkara's linguistic theory of 'adhyāsa' has created for himself by using the word as meaning judgmental combination. To meet the exigency of showing how any proposition, any descriptive or classificatory statement is illustrative of Śaṅkar's 'adhyāsa' in the sense of illicit combination he labours hard to establish why the terms—the subject and the predicate—must be accepted as radically distinct and logically incompatible. Next, since there cannot be any real combination or relation (positive) between incompatibles or categorially distincts, he takes the 'coupling' or 'joining together' of the subject and the predicate to mean a 'non-relational tie'[19]. Next, since the 'S–P' fixture in a determinate judgment is described in Indian philosophy as '*saṁsargāvagāhi*' he is compelled to invent a new meaning for the word 'saṁsarga' which is not to mean any relation. He is oblivious of the fact that the expression alternatively used in Indian epistemology is 'saṁbandhāvagāhi' where the word 'sambandha' means 'sambandha' and so a relation. In this context, he castigates his own teacher Dr. D. M. Datta for a mistake which that illustrious professor did not commit in the book under reference. Dr. Datta *did not say*, as he could not, that "according to the Advaitins all propositions are relational (samsargāvagāhi)". He says, some are, and some others, such as identity—propositions, are non-relational (samsargānavagāhi). Dr. Datta also does not say that even though the vedantins accept that all propositions are relational yet they establish an absolutism far more radical than that of the west.[20] This would really have been an impossible feat. Russell's complaint was against the universal 'S–P' type. Dr. Datta in the book under reference remarked that although the Advaita does not accept that all propositions are of the subject–predicate type, the identity propositions such as 'that thou art' being exceptions, yet it succeeds in establishing absolutism of a more radical kind.[21] It is the student of that illustrious professor who has landed himself in a series of blunders and contradictions in attempting the impossible. His statement that 'for Vedāntins, not all propositions are relational, but none is,[22] is a mistake. His second statement and a connected one inside the same paragraph that 'every proposition is for the Vedāntins of the subject–predicate type[23] is another mistake, and he knows that the proposition, 'He is that Devadatta' is not of that type.[24] There are innumerable others—all flowing from his intransient insistence on developing a 'linguistic theory of adhyāsa' in Sankara where it does not hold. But he will milk the he-goat all the same. To this end he employs the Sankarite expression 'coupling' even though he is not clear in what way and under what meaning this word which he uses to stand for the propositional combination or joining of the subject and the predicate will serve his purpose.

If the logical 'adhyāsa' of his meaning is to be a misuse of language, if it is to be anything illegitimate, the 'coupling' of the categorially different in the texture of any descriptive statement should mean an illegitimate 'relation'. Its function would be expressing a relation between unrelatables. In factual reference, again, this 'coupling' will be an apparent relation or a pseudo-relation. The judgment or proposition as a linguistic set-up will have then to be accepted as a relational set-up although illegitimate. It cannot then symbolise a 'non-relation' and the so-called 'coupling-function' in it cannot symbolise any 'non-relational tie'. By attempting to say that all propositions, according to the Advaita Vedānta, are non-relational, which is a mistake or misstatement of fact, and by insisting that they exhibit 'non-relational ties', he allows then to remain sacrosanct and legitimate and defeats his own purpose which could be served by showing them as relational and by showing the judgmental 'coupling' as an illegitimate relation or pseudo-relation and not as a 'non-relational tie'. Yet he insists on showing that every assertive tie is a non-relational tie, which quite apart from its unserviceability for this thesis, is his third grave mistake in the series.[25] To begin with the unserviceability of the notion that 'the assertive tie is a non-relational tie' for the thesis of 'adhyāsa' as a logical error: By way of explanation of this he says 'To say that it is a non-relational tie is to say that universals are not like caps or straight-jackets made to fit into one particular as opposed to another. Their very essence consists in their capacity to be applied to some rightly and to some wrongly.[26] What he means to say is perhaps that since a universal does not belong exclusively to one particular, since it is not applied to one particular to the exclusion of other particulars, therefore, it can be applied to some particulars rightly and to others wrongly. Even supposing that this analysis of the nature of a universal is correct, and a universal such as, 'cow' or 'cowness' in so far as it does not relate itself to my cow exlusively, may as a 'free floating thing' now settle upon another particular which is your cow and in this case rightly, thereafter on another particular, a man, a horse or a dog and in these cases wrongly, it would baffle one to understand how the right or wrong application in its regard can be an 'application' without application, that is, without getting it involved in a relation to its several locus. Does the possibility of both right and wrong application, besides showing it as an indifferent content, show also that it is not brought into relation with its locus although asserted of it? How a universal can become a 'predicate' without being predicated of the subject, how one of the items in a judgment can be asserted 'of' the other without entering into a relation—by being simply situated or juxtaposed in a 'non-relational tie'—is difficult to follow. If in a judgmental 'coupling' or 'joining', we really keep apart the categorially different 'subject' and 'predicate' the individual and the universal, by wedging in between the two a 'non-relational tie', there can be no error, logical or psychological. It thus appears that for his logical theory of adhyāsa it is necessary to regard the judgmental 'coupling' as a relation, however, illegitimate. The suggestion that the 'coupling' or the assertive tie is to be a non-relational tie seems to involve self-contradiction. That the judgmental 'coupling' of his conception is to be regarded as a relation, though illegitimate, becomes evident from his statement in the very next paragraph. Thus he says 'A judgment which states a fact is called false. But every judgment whether true or false in combining two elements which could not and should not be combined becomes on that account logically erroneous".[27] Is this 'coupling' together a coupling an existent (real) and non-existent (unreal) in a non-relational manner as has been said in the preceding paragraph ?

Now, about the alleged logical misbehaviour of a universal which according to our theorist explains the possibility of the logical error (adhyāsa) : It is stated that 'since they are capable of being applied to different instances on different occasions they are capable of being applied both rightly and wrongly.[28] But. this does not seem to furnish any ground for their misapplication The universals, since they are universals, are not, of course, limited to any one particular. But that they are 'free floating' is not the view of any school of the Vedānta. That they are *ante re* may be the platonic view but not the view of any school of Indian Philosophy. And that they are *applied to different instances on different occasions* is possibly a view peculiarly of our theorist's own. Neither the Naiyāyika 'inherence' nor the Vedānta 'tādātmya' furnishes any ground for the belief that the universals are applied from without, and upon different instances on different occasions. Moreover, its capacity to figure in a number of particulars all at once–*anekasamavetatvaṁ*–does not disprove its capacity to hold in any given particular, to fit into it. Its incapacity to hold any one particular of a certain kind would on the contrary disprove its capacity to inhere in many 'like' particulars. It would disprove its claim to be a universal, since an unattached universal may float as a simple 'singularity' in any haven of its choice, but it does not become a universal without a natural habitat in a group of particulars of which it is the common essence, or from which it is reared up by a conceptual process of abstraction. Such being the case, a universal, neither by itself, nor through the agency of a human sorter operating with it as something furnished ready-made in advance, is consciously misapplied. Errors become errors only when they are detected. And they are detected only through experience of contradiction. That all factual propositions are theoretically corrigible has not been upheld by any school of Indian philosophy, least of all by the *svataḥprāmāṇyavādis* like the Mīmāṁsā and the Vedānta. With the *parataḥprāmāṇyavādi* Nyāya a factual proposition is neutral (neither true nor false) prior to proof or validation. With the *svataḥ-aprāmāṇyavādi* Buddhist it is false inherently and factually, its truth only relative to its use and practical utility.

The greatest difficulty of the linguistic thesis on 'adhyāsa' as an illegitimate judgmental or propositional relation, or as it has been otherwise expressed, illegitimate 'coupling' of a logical subject—a particular, and a logical predicate, a universal, is its utter irrelevance for Śāṅkara vedānta in particular, as for Indian philosophy generally. Since this has been claimed to be the only correct presentation of Śaṅkara's concept of 'adhyāsa', utterly misunderstood by Śaṅkara's classical commentators, we shall now show that it has absolutely no basis in Śaṅkara's text in the Adhyāsabhāṣya. In course of our examination, we shall also show how this new adhyāsa theory is itself an instance of 'adhyāsa' in the real Śaṅkarite sense and how it has been engendered by the Saṁskāras of certain alien trends of thought aided by certain adventitious defects, such as, misreading of passages and misconstruction of meaning. To this we shall now turn.

The concept of 'adhyāsa' has been postulated and explained by Śaṅkara in the prelude to his Brahmasūtrabhāṣya called the Adhyāsabhāṣya. There *it has not been posed as a general theory but only as a special problem.* Śaṅkara is not interested in a general theory of illusion, error or misconception. The adhyāsa of the self on the not-self as of the not-self on the self and the illegitimate transference of the properties (*dharma*) of the one to the other constitute the one single subject-matter of his discourse. This has been described by him as the most basic and fundamental, vitiating all our normal day to day experience and behaviour. The kind of view of things and attitude towards life fostered by this adhyāsa, more meaningfully, by this ignorance of the true nature of the self as one self-shining all comprehensive pure spirit underlying the veil of multiple appearances has been called as a state of bondage. Liberation from this bondage, freedom from the normal limitations of the ignorant life, a life of enlightenment and spiritual freedom, has been described as the philosophic goal. This is realisation of Brahmatva by the self, empirical and phenomenal, by transcedence of its finitude and limitation and by the discovery of its absolute self identity with the one, non-dual immutable eternal presence (brahmātmaikatva). That this is all that has been said and expressed in the Adhyāsabhāṣya and that nothing has been said about any illogical propositional symbolism attempting to signify the 'linking' or 'coupling' relational or 'non-relational tying', between the logical subjects and the logical predicates of any description will be shown next through a textual rendering of the words and sentences of the adhyāsabhāṣya of Śaṅkara.

Including the interrogatives, which by posing questions or possible objections on behalf of an opponent (pūrvapakṣin) facilitate further clarification and elucidation of the point at issue. There are thirty-eight sentences all together in Śaṅkara's Adhyāsabhāṣya. Keeping in view the order and sequence of the different aspects of the problem raised and discussed, these sentences can be grouped and arranged as follows :

1. The first *two* sentences (in some editions one big complex sentence) while envisaging the *necessity* of postulation of 'adhyāsa' in the sense of misapprehension as an explanatory concept to resolve the conflict between the upaniṣadic idea of the true self and our habitual taking of it in course of our 'given' experiences and day to day behaviours as empirical individuals, bring forth the peculiar illogicality and consequently, logical indeterminability of the *fact of adhyāsa* in the given case. The illogicality of the phenomenon of adhyāsa of self and not-self is due to the fact that, not to speak of the revealed authority of the śrutis which declare the self and the not-self as remote from,

and as opposed to each other as is light from darkness, even our ordinary felt experience of 'I' on the one hand, and of 'thou' or 'This' on the other, of the subject and of the object-knower and the known-show them off as poles apart, and so incapable of being confused or *misidentified* one with the other. Notwithstanding this, Śaṅkara continues, in our habitual experience (anubhava)[29] of the self as 'This-I' (*ahamidaṁ*) and our reaction as 'I am this' and of the not-self as 'mine this' (*mamedaṁ*) or 'this is mine', the self and the not-self get fused *together* and mispresented. When, in course of our given experience, something appears differently from what it is in itself, from what it is in reality, the admission of that experience, although a 'given' experience, as *misapprehension*, and of the content experienced, although a 'given' content, as a *distorted appearance* (vivarta) becomes irresitable. Therefore, the *misidentification* or *fusion* of the self and not self in our habitual experience and normal reaction of life and the mistaken transference of the properties of one to the other will have to be admitted as 'adhyāsa' in the sense of *wrong superimposition*, although from the fact of the case, on account of their radical opposition (according to the śrutis) and polar distinction (in given knowledge) this 'adhyāsa' seems *logically inexplicable*. This is roughly what Śaṅkara says in the first two sentences.

This being the meaning of the opening sentence (or sentences) of Śaṅkara rendered textually, it is difficult to discover in them any *general* dissertation on the logic of language or tits alleged misuse in all descriptive statements in so far as the logical subject, an individual or particular, is 'coupled' or combined with the logical predicate, a free floating universal.[30] The discourse is singularly about *anyonyātādātmyādhyāsa* or *itaretaratādātmyādhyāsa* of *ātmā* and *anātmā* in the habitual experience and normal reaction of all mankind (*naisargika lokavyavahāra*). Yet our new interpreter of Śaṅkara's concept of 'adhyāsa' has discovered in these passages and in the Adhyāsabhāṣya generally, a critique of language, a discussion devoted exclusively to general misuse of words and expressions in propositional symbolism in so far as logical subject-words with referential meaning and predicate-words with predicative or descriptive uses are unlawfully joinied together doing violence to what he believes to be the 'logic of language'. This he supposes to be Śaṅkara's doctrine of 'adhyāsa' which, according to him, relates to logical and linguistic issues and has nothing to do with any psychological or experiential issue connected with illusion or misapprehension, although the classical commentators, one and all, utterly misunderstood it as that. We want to point out initially that in Śaṅkara there is no 'doctrine' of *adhyāsa* but only a 'concept' of *adhyāsa.* He envinces no interest in a *general theory* of adhyāsa. His interest is limited to offering an explanation of misapprehension or ignorance (positive) of the self and the Advaita theory of error developed by his adherents is a general elucidation of his meaning encased in his notion of 'adhyāsa' and that elucidation did not move in linguistic lines.

2. The concept of 'adhyāsa' postulated in the opening two sentences to explain the anomaly between the nature of the self as communicated by the extra-ordinary (*alaukika*) *pramāṇa* and the self as is apprehended in ordinary experience calls for an explanation. So Śaṅkara in the immediately next two sentences poses the question as to what the concept means, and gives his own definition that *adhyāsa* is the *apparent presentation* (avabhāsa) of a content *similar to one previously perceived* (pūrvadṛṣṭasya avabhāsa) in a locus characterised by its absolute negation (paratra), generated by a process *resembling memory* (*smṛtirūpa*).

3. This is follwed by *five* sentences, three of which for the purpose of elucidation bring into comparison, three other alternative views already current on the self-same subject-matter, the fourth points out general agreement of those views with Śaṅkara's own on essential point, and this is followed by two common-place examples of the phenomenon in question in the last sentences of this group.

4. Next follows, the group of *six* sentences including two interrogatives which by posing two very intricate problems confronting Śaṅkara's postulation of 'adhyāsa' of the not-self on the self, lead to further elucidation. The problems raised are: in the illustrations cited in the previous para, the locus of 'adhyāsa' is felt as an objective content (*viṣaya*) and it is also apprehended as 'out there in front' (*purovasthita*). But these two circumstances seem to be absent in respect of the suggested superimposition of the not-self on the self. In the last sentence

of the group, Sàṅkara reiterates that the alleged discrepancies between the commonly accepted instance of 'adhyāsa' and his postulated case of 'adhyāsa' of self and not-self can be explained away—*evaṁ aviruddhaḥa pratyagātmani api anātmādhyāsaḥ*. Explanation of this is given in three sentences in the middle. The gist of this is that the self, though not content of knowledge *as* itself, can be proxy, become an appasent content in term of the ego which is the vehicle of 'I-consciousness'. And in order to be just *felt* as a content 'out-there', a perceptible locus, it is not necessary that something must be *really so*, and always: the imperceptible either even though no perceptible locus out there in space, is nevertheless taken as that by the unenlightened who seem to perceive duskiness and cauldron shape in it. Here, the ether is not a 'purovasthita viṣaya', yet we seem to perceive it as that, and also as characterised by certain 'rūpas', although it is nirūpa'.

5. Next there are *two* sentences which state that *this*, 'adhyāsa' of the self and the not-self in so far as it fulfils requirements of the definition given earlier is *avidyā* in the sense of *misapprehension only*, and that this, therefore, cannot make any difference as to the real nature of thing, cannot affect it materially. This suggests vivartavāda of Sàṅkara. The content of a misapprehension is both peculiar to it and limited to it; it is no feature of the thing itself, no real part of it, no real modification of it; it is a floating appearance.

6. Then, comes a remarkable sentence which states that this avidyā or ignorance of the form of mistaken mutual identification of self and not-self forms the ground of all our distinctions as between ways of knowing and objects of knowledge, both vedic and laukika, and that even our revealed doctrines, as enjoining, as prohibitive, even as instructive of ways of release presuppose this avidyā as their basis and are vitiated by it. In other words, without mistaken identification of the self and not self there can be no distinction of knower, knowing and known in our normal experience and behaviour and there can be no relevance for injunctions in respect of 'Do's' or 'Don't' as also for instructions for release from bondage.

7. The whole-sale condemnation of all *forms* of knowledge. *means* of knowledge as also of all our behaviours based upon

them is not easy to grasp. So, in the next group of *eight* sentences, Śaṅkara explains how evidently such is the case. The first sentence is an interrogative posing the problem, and the subsequent sentences form the explanation—the solution of the problem. Śaṅkara's argument is briefly this: without mistaken feeling (abhimāna) of 'I' in the body and 'mine' in the sense organs, that is, without mistaken identification of the self with the body and the sense-organs, there can be no 'knower' and 'known' as there can be no knowing as a process or activity, no behaviourial drives based upon or initiated by them.

8. Then comes the group of three sentences showing by means of illustration that so far as this ignorance in the form of mistaken sense of identity of the self with the body is concerned, there is nothing to distinguish the so-called enlightened behaviour of human beings from the blind instinctive behaviour of lower animals, and in the end, arguing that if the animal behaviour is irrational so also is the behaviour of even the most intelligent among human beings (vyutpattimatām).

9. In the group of *three* sentences that follow next the claim for special treatment on behalf of behaviours and acts guided by the śāstras is dismissed on the ground that these do not involve the knowledge of the true self as revealed in the Vedānta and would not endure and survive in the event of that highest enlightenment being there (na ativartate).

10. Next, in course of *four* sentences, Śaṅkara demonstrates in what way there has taken place an 'adhyāsa' (explained already as wrong apprenhension of a content where it is not nor ever can be) in the case of the true self. He starts will the most evident cases of illicit superimposition, in which properties commonly known as foreign and as belonging to quite 'others'—*bāhyadharmān* are misattributed to the self, and then, progressively, shows misattribution of those which though alien are more subtle and so less evident, such as properties of the body (*dehadharmān*), the properties of the senses (*indriyadharmān*) and the properties of the mind or *antaḥkaraṇa* . Then, finally, he shows the most subtle form of this 'adhyāsa' in which the ego which has its expression in self-consciousness as 'I' (ahampratyayin) is superimposed on pure consciousness, the witness—universal of all presentations in term of psychical modifications

but uninvolved in them and contrary wise, in which this witness—universal in its turn is superimposed on antaḥkaraṇa etc. In the last sentence of the group, this 'adhyāsa' of self and not-self is declared to be of the form of misapprehension (mithyā-pratyayarūpa) and beginningless and also as interminable in the absence of right knowledge.

11. In the *two* concluding sentences, Śaṅkara states that this 'adhyāsa' has been the root cause of bondage and of all the evils of life, and that the declared aim and purpose of the vedānta texts has been the eradication of this root evil by fostering the knowledge of absolute oneness of the self as pure spirit (*ātmaika tvavidyāpratipattaye*)'.

The sentences presented in several groups above according to their import are *all* the sentences of Śaṅkara's Adhyāsa-bhāṣya. They have, from beginning to end, one single theme for discussion, and it is the basic *avidyā* or ignorance involved in the wrong identification (*itaretarādhyāsa*) of self and not-self. This is the 'adhyasa' that Śankara speaks of. On account of it we do not have knowledge of the self as it is, we have a distorted view of it as the phenomenal subject (jñātā), the agent (kartā) and the enjoyer (bhoktā). Adhyāsa, then, is a mechanicsm of distortion. Due to it a thing appears other than what it is, it is mistaken for what it is not. Whenever there is contradiction between two experiences of the same thing, wherever something is apprehended otherwise than what it is or what it is known to be, we resolve the contradiction between the two experiences by regarding one of them as false or apparant that is, by regarding one of them as an 'adhyāsa'. Śaṅkara, in his Adyāsa-bhāṣya, seeks to explain our habitual experience of the self which differes radically from the self as it is described in the upaniṣads, otherwise called the vedānta texts, as a case of 'adhyāsa'. He explains what he means by it by comparing his own account with other current accounts of the phenomenon of illusion and gives two commonly accepted examples of it. Had he not been concerned with the wrong psychoses involved in misperception or misapprehension, he would not have compared his own account with other accounts of perceptual error and would not have cited two illustrations from the same field. Again, had not the suggested 'adhyāsa' of self and not-self been the specific subject-matter of his discourse he would not have taken so much trouble in explaining away the anomally between the suggested 'adhyāsa' of the not-self on the self in which the locus is not a *purovasthitaviṣaya* and the two illustrations of 'adhyāsa' cited by him from the field of common experience in which the locus of 'adhyāsa' is so. As this point is very significant for the metaphysics of the Advaita Vedānta and very much liable for misunderstanding and misrepresentation, it is necessary to explain it in some details. It will be seen that the illustration of the invisible Sky given by Śaṅkara is an illustration of an *actual case of illusion* or misperception which the ignorant experiences, and *not* of error as a logical possibility as the new interpreter has misunderstood it to be.

The phenomenon of 'adhyāsa' has an element of irrationality, *anirvacanīyatā*, characterising it. The nacre does not *become* silver, nor does the single moon *become* double. The nacre only *appears* as silver and the single moon *appears* as double in certain given experiences. So an 'adhyāsa' is an error of *experience* and its illogicality consists in this that in it a thing turns out in experience what it cannot be materially and in fact. In this respect the experience concerned is understood to misidentify a thing with its absolute 'other', with that which is *is not*. This may also be interpreted as illicitly superimposing a content on a foreign locus. Now, in the opening lines, Śaṅkara has suggested 'adhyāsa' of not–self on the self as also of the self on the not-self as a fact of our given experience and habitual reaction based on such experience. It is to show that Śaṅkara's interest does not lie in expounding a general theory of error of any description but in explaining the *peculiar nature* of the suggested 'adhyāsa' of the not-self on the self and what metaphysical implications it entails that certain anomalies between the *suggested* 'adhyāsa' of the not-self on the self and the *known* 'adhyāsa' in the two common place illustrations are brought forth through the *pūrvapakṣa*. The anomalies are: The locus of commonly known 'adhyāsa' cited is found to be an objective something (*viṣaya*) given as 'out there in front of us' (purovasthita). The self in the given case, which is to be the locus of illicit superimposition has already been described as a non-object (*aviṣaya*) and being so cannot be supposed to be 'out there in front'. In this, Śaṅkara is *not* dealing with any logical or linguistic error or with the general or formal possibility of linguistic error as a necessary feature of descriptive language as our new interpreter, oblivious of the context of discussion, and heedless of the meaning of the words used in the two sentences embodying Śaṅkara's replies, has misconstrued. The 'adhyāsa' of not self on the self, is, according to Śaṅkara a fact or an event that has *actually taken place*. It is illustrated in our everyday experience and behaviour. His problem is: how to explain this? How can it be taken as an 'adhyāsa' even though it does not seem to fulfil the commonly regarded necessary conditions of 'adhyāsa', such as, the *purovasthitatva* and *viṣayatva* of the locus of superimposition. Classical commentators have explained the psychological possibility of this 'adhyāsa' in great details. For the purpose of this essay, however, we shall bring out Śaṅkara's solution very briefly. Śaṅkara's reply in contained in two sentences which should be taken interconnectedly and not as presenting alternative solutions. It is this: the self the vedānta speaks of, is, of course, *aviṣaya* and not an object in *any* sense. Not being limited or localised, it cannot also be *purovasthita* in relation to a percipient distinguished from it. But all the same, though, in itself, it is neither an object nor a direct 'content' (*viṣaya*) which in relation to the senses may be supposed to be 'out there in front of us', yet as 'informed' by or apparently determined (*upahita*) by the ego, antaḥkaraṇa etc., and *as that* being the *inner* self-conscious principle apperceiving itself in distinction from the 'Thou', 'This', or objectivity in general, it realises itself as a self-shining (*svaprakāśa*) *presence* and so, as a *sākṣāt viṣaya* in a *derivative* and some what quixotic sense. What oddity can there be in this supposition, pray? Does not *ākāśa* (ether), although not a given object, nor given outside (since it is all-encompassing) as something out there and as in front of us, *appear* to have colours and shapes even though it is devoid of colour, shape and tactual determination (which could foster contact sensation? To be the locus of an 'adhyāsa', therefore, it is *not necessary* (na ca ayam asti niyamaḥ) that something should be *really* an object in direct contact and actually given in front of us. All that is necessary is that it should *appear as that* and be *felt to be* so. And this condition is fulfilled by the suggested 'adhyāsa' of not-self on the self. Though *as* itself, the self is not an object, as the locus of 'adhyasa' it is felt as one, though not localised as a content in direct contact as a distinctive 'this there', it is, nevertheless taken *as if* it is like that in the same way as the all-pervading Ether (ākāśa) which is invisible and never localisable in itself and which is devoid of *rūpa*, *ākāra* and *sparśaguṇa* is apprehended illusorily as out there looking like a cauldron and having colour etc.. And Ākāśa is the symbol of Brahman or Ātman-*Ākāśastallingāt*. The suggested meaning of the two sentences taken together is: To be apprehended as a direct content (Sakṣāt viṣaya) as also as 'out there in front' (purovasthita), it is not necessary that something must be so in reality or as itself. It may become so *derivatively*, and in a secondary sense, by *appearing as that* without being so in the same way as the all-encompassing Ether which is no visible object, not also a direct content, not also in contact with us, not also anything having colour or shape, is nevertheless wrongly apprehended by the unenlightened as a really determined and determinate something by being taken under certain adventitious conditions (upādhis). The *Vivaraṇuprameya Saṁgraha* hints at the very same meaning when it insists that in 'adhyāsa', the self figures in its improved (saṁsṛṣtarūpeṇa) form and not as itself (svarūpeṇa). Having explained the *modus operendi* of the 'adhyāsa' of self and not-self in this way, Śaṅkara shows in the remaining portion of the Adhyāsa-bhāṣya how this primal ignorance has crept into and vitiated all our day to day experiences and conventional behaviours and why its elimination, root and branch, is an indispensable condition of release from the bondage of the ignorant life that we habitually lead.

There is thus not a single word anywhere in the entire text of the Adhyāsa-bhāṣya which besides being a narration or explanation *in* language, speaks *of* language or its misuse. In the theoretic mode of an argument by *arthāpatti*, the concept of 'adhyāsa' is postulated to resolve the contradiction between our habitual taking of the self as the empirical person and the right view of the self as one self-shining unnegatable reality, the non-dual spirit as propagated by the vedānta (*vedāntavedya*). This 'adhyāsa' being of the nature of taking something as that which it is *not*, nor ever *can be*, has a dual character as concealing (*āvaraṇa*) the thing as it is, and as projecting (*vikṣepa*) on it the appearance, that which it is not. It is in relation to this double or dual contexts that it is described as an *illicit* superimposition on a true locus, a mixing up of the real and the unreal, a *covering up* of the real by the false (mithunīkṛtya), a misbecoming of one for another, a misidentification. From the first line to the last line in the Adhyāsa-bhāṣya, Śaṅkara's theme of discourse is not a general theory of 'adhyāsa' or error but the special case of 'adhyāsa' of the self and the not-self. Yet our new interpreter finds in it nothing but discourse on illicit or illogical combination of categorially distinct ideas in propositional set-up as an inalienable feature of all descriptive language. How could this happen ?

The explanation is not far to seek. When something is mistaken for something else, when there is a fundamental misunderstanding of one thing for another which latter is absolutely different, there we have 'adhyāsa' of Sakṅara's meaning. In misreading and misunderstanding Śaṅkara's 'adhyāsa' of self and not-self as an allegedly illogical connection (a non-relational tie ?) between a particular as the logical subject and a free-floating universal as predicate, our interpreter is under a spell of 'adhyāsa' of Śaṅkara's concept of *adhyāsa*. And the incidence of this 'adhyāsa' of *adhyāsa* can be explained in the way the Śankarites explain occurrence of any 'adhyāsa'. *Adhyāsa* is mispresentation of a content similar to one seen in the past-generated by *Saṁskāras*, compounded by certain adventitious defects, such as, dim light, defect of sense-organs etc. How these factors have worked in our new interpreter's *adhyāsa* of Śaṅkara's conception of 'adhyāsa' are now being shown.

The opening lines of Adhyāsa-bhāṣya are taken to mean by he new interpreter as follows . "Ideas like you and I and subject and object are opposed to one another like light and darkness. Any coupling of them, therefore, does violence against accepted principles of logic. But since no linguistic expressions are possible without joining ideas which are distinct and different, language by its very nature necessarily falsifies, and it is not a fit instrument for delivering the truth."[31] In his essay published in the Quarterly the first part of Śaṅkara's statement is represented as meaning, "The shpere of the application of ideas of subject and object are mutually exclusive as those of light and darkness and any coupling of them is ruled out by the settled points of logic".[32] Persons who have not seen Śaṅkara's text in original and have not also gone through even the not-too-good translation of the lines given by Thibaut are likely to take the mistaken view that the English rendering of the lines presented above are roughly correct. But the fact is otherwise. *It is not only wholly incorrect, it is a distortion.* Śaṅkara has not used a single word to express that "since no linguistic expressions are possible without joining ideas which are distinct and different, language by its very nature necessarily falsifies, and is not a fit instrument for delivering the truth." Nothing corresponding to this nonsense is there in Śaṅkara's passage, and this is, therefore, no translation, literal or figurative, although the view is attributed to Śaṅkara. Can this be teken an idea logically deducible from what Śaṅkara has said in the first part of the sentence ? The answer is an emphatic 'no'. In Śaṅkara's statement 'you and I', 'subject and object' are not used as distinct pairs, connected by the conjunctive 'and'. Here there are no four separate items; 'I' and 'subject' and 'thou and object' are syntactically related as equivalents. Moreover, 'I' and 'thou' are not the expressions Śaṅkara's uses. His expressions are 'that which is accessible to the notion of 'Thou' and 'that which is accessible to the notion of 'I', that is, that to which the word 'Thou' and the word 'I' point or refer—'*Yuṣmadpratyayagocara*' and '*Asmatpratyayagocara*'. These are used as adjuncts or adjectives to the expressions '*viṣaya*' and '*viṣayi*' respectively. The expressions '*viṣayi*' and (*viṣaya*' in the context mean 'knower' and 'known' or subject of knowledge (*Jñātā*) and the object of knowledge (*jñeya*). So, nothing is said about the 'ideas of you and I *and* subject and object. What is said is about the knower and the known apprehended referentially as the 'I' and the 'this' or 'Thou', and it is said that in so far as they are poles apart in their reference, they are incapable of being identified, that is, of being taken one as the other (*itaretarabhāvānupapattau itaretarabhāvānupatpattiḥ*). Nothing is, therefore, said about *any* and *every* distinct word being brouhgt into relation or being joined together as part of descriptive language. About the knower which is referred to as 'I' and is radically opposed to he reference of 'this' or 'Thou', it is said that it should not be misidentified with the object known and vice versa in so far as the *essenee of the knower is constituted by pure consciousness* which is self-revealed whereas the object is *jaḍa* and dependently revealed. In brief, it is about the illicit identification of the self with the not-self and of the not-self with the self in our ordinary experience and behaviour that Śaṅkara is speaking, and *not* about linguistic misuse of all sorts of distinct words in descriptive statements.

To facilitate comparison with Śaṅkara's text in order to find out if there is any basis for a logico-linguistic theory of 'Adhyāsa' in Śaṅkara's opening lines a close literal translation possibly much better than Thibaut's rendering, is being given. Thus Śaṅkara says : "In as much as the mutual identification (*itaretarabhāva*) of the *viṣaya* (the object, the known content) and the *viṣayi* (the knower, the subject of knowledge) accessible to the cognitive reference as 'Thou' (this) and as 'I' respectively (*yuṣmadasmatpratyayagocarayoḥ*), by nature as radically opposed as is darkness to light (tamaḥprakāṣavat viruddhasvabhāvayoḥ) being admitted as absurd (anupapattau siddhāyam), the mutual identification of their respective properties and characteristics is more so (*taddharmāṇāmapi sutarām itaretarabhāvānupapattiḥ*), therefore, the supposition of a super imposition of the *viṣaya* cognised as a 'Thou' (this) and its characteristics on the *visayi*, the essential nature of which is pure consciousness and which is cognitively apprehended as the 'I' and contrariwise, the superimposition of the *viṣayui* and its characteristics on the *viṣaya* will have to be admitted as logically untenable (*ityataḥ asmatpratyayagocare viṣayiṇi cidātmake yuṣmatpratyayagocharasya viṣayasya taddharmāṇāñca, tadviparyayeṇa visayiṇaḥ taddharmāṇāñca viṣaye adhyāsaḥ mithyeti bhavituṁ yuktaṁ*). Notwithstanding this, failing to discriminate, one from the other, the substantives and characteristics which are radically separate (*tathāpi utyantaviviktayoḥ dharma-dharminoḥ itaretarāvivekena*), and also superimposing the being (self identity) of the one upon another as also the characteristics of the one upon another (*anyonyusmin anyonyātmakatām anyonyadharmān ca adhyasya*) and thus effecting a union of the Real and the false (*satyānṛte* *mithunīkṛtya*), there has resulted from ignorance (*mithyājñānanimittaḥ*) this natural (beginningless) procedure and behaviour (conduct or reaction) of mankind as 'I–this', 'mine–this' (*ahamidaṁ mamedaṁ iti naisarjikoyaṁ lokavyavahāraḥ*).[33]

It will be clear from above that Śaṅkara complains of 'adhyāsa' of *viṣayi* and *viṣaya* and that this 'adhyāsa' is of two forms—*anyonyasmin anyonyātmakatām*, misidentity of one with another, otherwise called '*ekatvādhyāsa*' and *anyonyasmin anyonyadharmam*, misattribution of the properties of one to the other, otherwise called '*tādātmyādhyāsa*'. He also points out in the first part of his statement that the second presupposes the first and where the first is illegitimate the second is more so. Vivaraṇaprameya brings out the distinction more clearly by showing that the first is *ānubhavika*, that is, relative to one's immediate feeling or experience, while the second involving relation between a substrantive and attributive is *vyāvahārika*, that is, relative to behaviourial reaction. The illustrations '*ahamidaṁ*' and '*mamedaṁ*' are to be interpreted in both the ways. But where elementary issues are misunderstood and misinterpreted there is little scope for deeper analysis. Our new interpreter *initially commits the mistake in taking Śaṅkara's viṣayi and viṣaya to mean the 'logical subject' and the 'logical predicate' of a proposition.* It did not strike him that there is no human language in which *viṣaya* and '*vidheya*' are used as equivalent terms. He did not also pause to consider that what can be regarded as the 'logical subject' and the 'logical predicate' —both fall inside Śaṅkara's conceps of *viṣaya*, meaning the object known (*jneya*). At the basis of his mistake in confounding *viṣayi* and *viṣaya* with logical subject and predicate can be found his incapacity to follow the syntactical link between *viṣayi* and *asmatpratyayagocara* in the one case, and between *viṣaya* and *yuṣmatpratyayagocara* in the other case—a syntactical connection exhibited at least twice by Śaṅkara in the opening paragraph. This his error, which can be called an error of omission (non-observation) is, however, prelude to another error of comission (mal-observation), and this consists in his regarding *yuṣmat*, *Asmat*, *Viṣayi*, and *Viṣaya* as logically distinct words allied to Russell's 'ego-centric particulars'. And this accounts for his conjunctive use of these expressions in his rendering (misrendering) as 'ideas like you and I *and* subject and object etc'. Next, since he understands descriptive language as coupling and combining two distinct ideas, and since any such combination is to take the form, not of two conjoined words, such as, tables *and* chairs, or red and not-red, which do not make a sentence, but of a proposition or sentence to fulfil the requirement of descriptive language. So Śaṅkara's *subject* and *object* get metamorphosed into the logical *subject* and the logical *predicate*. This then prepares the ground for further metamorphosis. It is this. Since Śaṅkara speaks of 'adhyāsa' about subject and object, and since the subject and object of Śaṅkara has to be taken as subject and predicate to meet the exigency of his faulty 'Saṁskāra', of descriptive language or descriptive statements as illogically combining or coupling two incompatible contents, subject and predicate, therefore, the 'adhyāsa' of Śaṅkara, naturally, has to stand for a "propositional relation" being understood as illogical. This, in short, gives the early phase in the development of the linguistic theory of 'adhyāsa'. The most entriguing thing about it is : what was introduced by Śaṅkara as a 'particular instance' of 'adhyasa' in respect of self and the not-self, the subject and the object is, through misunderstanding of the conventional meanings of words used, made into the 'general pattern' of all adhyāsas as a *propositional relation between logical subjects and logical predicates* !

For the second stage in the development of this marvellous thesis, he had to come under a further impact of illusion, a new and an additional 'adhyāsa'. Coming across, Sankara's definition of 'adhyasa' he becomes the victim of this new 'adhyāsa'. But here the entire blame is not to be laid at his door. Mr. George Thibaut who was acting as his guide proved a false guide, since in spite of the reference he made to the Bhāmati in his foot notes, he did not have a clear grasp of Śaṅkara's definition.[34] Śaṅkara's '*Śmṛtirūpaḥ paratra pūrvadṛṣṭāvabhāsaḥ*' was by Thibaut rendered into 'The apparant presentation, in the form of remembrance, to consciousness of something previously observed, in some other thing.' This innocent looking translation becomes a grievous mistake when 'smṛtirūpa' of the definition is misinterpreted as a form of 'remembering' as has been done by Thibaut, or as meaning 'memory' as has been understood by the new interpreter.[35] The expression 'smṛttirūpa' does not mean *smṛti*. *Smṛti* is knowlepge of something past *as past*, recognition (*pratyabhijñā*) is the knowledge of something *present* as identical with its past-self, 'adhyasa' involving wrong presentation is neither. But all the three have a common factor which is: 'being occasioned by past '*saṁskāra*' –*pūrvasaṁskārajanyatā*. But while memory is *exclusively* due to this *saṁskara* and recognition is partly conditioned by the present *perception*, an 'adhyāsa' or misperception is determined partly by *non-perception* of the given as itself due to certain adventitious defect. Any way, in order not to confuse with the Prābhākar view of error, the illusion content is not to be taken as a 'remembered' content but only as a mispsesentation. Thibaut is not clear on this point. The interpretation given by the new theorist is based on a mistaken deduction made from Thibaut's analysis of the Bhāmati where Bhāmati presents the case of the right application of a class-concept to a new case of perception of an individual. This he takes up as showing the analysis of 'adhyāsa' and, therefore, of wrong application of a concept, and as a result, he comes out with the thesis that 'in his deifinition of 'adhyāsa' Śaṅkara seems to proclaim that any descriptive statement involves the use of a class-idea and this class-idea which is generated and presented by *Smṛti* falsifies the unique character of the unique individual'.[36] That 'adhyāsa' in Śaṅkara's taking is a memory generating a class-idea is simply ludicrous since memory does not generate such ideas, and in the perception of silver in a nacre, there is misperception of *one content for another*, and there is no *mispredication* of a character to a substantive *given* already in advance. In the given case, we say 'This is silver', not 'the nacre in silver', not also 'this is *a* silver, as we say, 'this is *a* cow'. It can be seen that neither the rendering of Śaṅkar'as definition of 'adhyāsa' attempted by our new interpreter as shown above nor the rendering given by him in his paper in the Quarterly where 'adhyāsa' is openly taken by him as a 'new doctrine of predication', he shows any respect to the words used by Śaṅkara in the definition stated by him.[37] This creates the impression that, according to this new interpreter, to present the view of a classical philosopher it is unnecessary or superfluous to see what he has *actually said* and the proper philosophic approach would be to ignore all 'factual details' (since they are factual) and to theorise about what the philosopher 'should have said'. Such a discussion may be philosophic, according to the new norm, but it is simply unacademic.

The 'avabhāsa' called 'adhyāsa' is a given presentative exprience which is never known in all its definable characteristics unless and until it is sublated,—being initially indistinguishable from normal presentative experience. When it is *known* as an 'adhyāsa', it is found to be a presentative experience (or experience of a presented content) which as sublated is not a 'bhāsa' but an 'avabhāsa'; it is also known as mistaking one thing for another; lastly, it is felt as some process which *like* smṛti is generated by past associations (*saṁskāra*), although not by that alone as smṛti is, but by *saṁskāras* compounded by some adventitinos defects. According to Vācaspati 'avabhāsa' is the most significant part of the definition of Śaṅkara, while Ratnaprabhā takes 'paratra avabhāsa' as the most significant part. The other expressions, such as, 'smṛtirūpa' and 'pūrvadṛṣṭa' are to be taken as adjuncts. Pañcapādikā or Vivaraṇa shows no disagreement on this rendering. Taking note of all these, Śaṅkara's definition of 'adhyāsa' can be textually rendered as follows: *Adhyāsa*, as a false cognition, is an apparent presentative experience in an alien locus of a content *like* one seen in the past, resembling smṛti or memory—knowledge. Again, *adhyāsa*, in the sense of a false content, is "an apparently presented content in an alien locus, resembling one seen in the past, *as* in memory." In no sense, it can be the application of a class-concept or a universal misrepresenting a unique individual which the theorist regards as the general feature of all descriptive statements or propositions, firstly, because it is *not* what Śaṅkara says, secondly, because in 'adhyāsa', we do not have a general theory of predication, what we have is mistaking one thing for another or misidentifying things, thirdly because every judgmental knowledge in terms of a concept is *not* a case of a sublated knowledge as 'avabhāsa' always is, and fourthly, becuause the concept of unique individual with unique character is unknown to the Advaita literature,—

neither Brahman, the qualityless, nor the phenomenal pluralities with both generic and specific and characters integrated by the relation of *tādātmya* being one such.

If the first stage of the linguistic theory of 'adhyāsa' has been reached by an *ādhyāsika* taking of the *viṣaya* and the *viṣayi* of Śaṅkara (which meant subject of knowledge and object of knowledge, *jñātā* and *jñeya*) as the logical subject and the logical predicate of any proposition and so of any descriptive statement, the second stage is reached when this logical subject and the logical predicate are shown respectively. As the unique individual and the free-floating class-idea or universal behaving eratically in relation to its locus. An *ādhyāsika* view of Śaṅkara's definition of 'adhyāsa' as a predicational relation between an individual and a class-idea helps the new theorist to achieve this transition. What is remarkable here is that, while the first *adhyāsa* in respect of the meaning of Śaṅkara's opening sentence enables the theorist to leave off Śaṅkara's context and his discussion on the 'adhyāsa' of self and not-self—the subject-matter of his entire discourse in the Adhyāsa-bhāṣya and to reinterprete 'adhyāsa' as dealing with the illegitimate relationship between the logical subject and logical predicate in all descriptive statement, this new *adhyāsa* in respect of Śaṅkara's definition of 'adhyāsa' enables him to misconstrue all propostional relations in descriptive sentences as a relation between a unique individual or a particular as the subject and a universal or class-idea as a predicate. But there is also a third and final stage in the *ādhyāsika* rendering not only of Śaṅkara but also of the principles of logic prevalent among ordinary mortals. To this we now turn.

Undertaking to discharge the self-imposed responsibility of demonstrating how a propositional relation can fare as an 'adhyāsa',—an illogical construction, and how this ingenious offspring of self-deception can pass as the Śaṅkarite conception of 'adhyāsa', he, on the one hand, reduces the logical subject and the logical predicate to logical absurdities, and on the other hand, misquotes or misrepresents classical commentators and classical texts as lending support to his nonsense. This, then, is the third and the consummate phase of his *ādhyāsika* rendering of Śaṅkara's 'adhyāsa'. To be incompatible, the logical subject and the logical predicate of descriptive statements must be shown as categorially distinct. This is done by taking the one as a unique individual, a self-complete entity with existential import but without any descriptive meaning, and by taking the other as a free-floating apparition which although a universal does not necessarily contain the implication of having been instantiated. In this way, he shelves the one beyond the pale of language and rears the other up to the unearthly region of abstract singularity (since nothing inhering in number of individuals can be a universal). In this, he falls a victim to a series of new *adhyāsas*. He does not pause to consider first, if such an abstracted individual and a disembodied universal can work as any logical subject and logical predicate of any propositions, contrariwise if the logical subject and the logical predicate of propositions can be *as themselves* extended to such absurd limits. Yet this absurdity is bolstered up in order to provide support for the so-called doctrine of ‘adhyāsa’ as a logical doctrine as distinguished from the psychological. Lest any one should suspect that the absurd logical doctrine of ‘adhyāsa’ manipulated by him as absolutely no relevance for the Śaṅkarite conception, he, on the next, takes the help of certain *ādhyāsika* interpretation of a few classical passages here and there. The most important as also the most interesting item in his *ādhyāsika* venture with ‘adhyāsa’ can be found in this that losing sight of the syntactical connection between subject and ‘*asmatpratyagocara*’ on the one hand, and object and ‘yuṣmatpratyayagocara’ on the other, Śaṅkara's statement in respect of a *particular instance of adhyāsa, such as between self and not-self* or between jñātā and ‘jñeya’ is *misunderstood and misinterpreted by him as a relation between logical subject and logical predicate, furnishing the general basis of all kinds* of a‘ adhyāsas’ on linguistic lines. The relation between a logical subject and logical predicate, of course, gives a proposition or linguistic statement. So through misunderstanding and misinterpretation of the meaning of ‘subject’ and ‘object’, he comes to fashion his linguistic theory of *adhyāsa* as involving an illegitimate tying between any subject-word and predicate word. What a fertile imagination! Then, again, Śaṅkara's own statement in the adhyāsa-bhāsya to the effect that in order that there may take place an ‘adhyāsa’ in the sense of an illusion or misperception, it is *not* an absolutely necessary condition that the locus of ‘ adhyāsa ’ or the object to be misperceived, must be one ‘ given ’ as ‘ a direct content out there in front of the perceiver, since ākāśa, although no perceivable and no direct content present in front, is as a matter of fact, wrongly taken to be so, and properties which can never be attributed to it are *actually* and wrongly attributed to it by the ignorant—is misconstrued by our theorist as a statement not in support of an *actual* and so *psychological illusion* to which all of us are ordinarily subject, but as a statement in support of the absurd logical and linguistic theory of ‘ adhyāsa ’ of his manipulation. Not only Śaṅkara, even Vācaspati in certain imaginary passages[38] is quoted as replying that ‘ the vedānta doctrine of logical error condemns equally those judgment which are correct and those which are called incorrect ones.’ Similarly, the explanation given by vivaraṇaprameya and M.M. P. N. Tarkabhūṣaṇ of the relation of ‘ Tādātmya ’ is misread and misinterpreted as an explanation of ‘ Tādātmyādhyāsa ’[39], simply because the two concepts ‘ tādātmya ’ and ‘ tādātmyādhyāsa ’ appear as synonymous to him. His crowning achievement in this direction, however, can be found when he quotes the passage from vivarṇaprameya—“ *yadyapi ātmānātmanoḥ anyonyasmin anyonyatādātmyādhyāsaḥ samānaḥ tathāpi ātmanaḥ saṁsṛṣṭarūpena eva adhyāsaḥ na svarūpena iti satyatvaṁ* ” as ‘ forcefully ’ and ‘ clearly ’ explaining the universal as a mere idea (kalpanā) and the particular as the Real.[40] Had it not been true that our friend, in his revolt against the classical and so traditional interpreters of S̀aṅkara, had been all the while labouring under the spell of a series of ‘ adhyāsas ’ of the classical psychological type, the charge of intellectual dishonesty and deliberate fabrication would habe been irresistible.

In consideration of the peculiar predicament he has been labouring under, his charges that S̀aṅkara's philosophy and the Śaṅkarite concept of ‘ adhyāsa ’ have been “ utterly misunderstood ” by all his classical commentators and interpreters down up to our own times, need not be considered seriously. His criticisms of S̀aṅkara's concept of ‘ adhyāsa ’ in his article published in the Quarterly, proceeding as they do from an *ādhyāsika* rendering of that concept, should be similarly ignored as not affecting S̀aṅkara or his doctrine in any way, and did not S̀aṅkara himself say—" *yatra yadadhyāsaḥ tatkṛtena doṣeṇa guṇena vā aṇumātreṇāpi sa na sambadhyate* "? Śaṅkara by his *viṣaya* and *viṣayi* did *not* understand the subject and predicate of any linguistic expression. He did *not* also take 'adhyāsa' to stand for a propositional relation of any description. In his Adhyāsa-bhāṣya, he was concerned *neither* with any theory of predication *nor* with any critique of language. He also did *not* evince any interest in a general theory of error or illusion. He was singularly interested in the mistaken sense of identity and the illicit superimposition of the self and not-self which our conventional experience and behaviour entail and involve. And this he named as 'adhyāsa', and he took it to mean mistaking a thing for what it is not and what it can never be. By rejecting *samavāya* as a relation and expousing *tādātmya*, he discountenances independent reality of relation. He did not identify *tādātmya* witn *tādātmyaadhyāsa*. It is *not* his view that in every proposition, a particular is collected under a universal either of the sortal type or a characterising type. It is *not* Śaṅkara's view that every proposition is of the subject-predicate type. It is *not* Śaṅkara's view that the logical subject and the logical predicate—one being a unique individual, a bare particular, and the other being a free-floating universal—are categorially distinct and opposed and that any relation between them is, therefore, logically false, and that this is 'adhyāsa' of his meaning. In Śaṅkara's philosophy, there is *no* room for bare particulars and free-floating universals, and *no* place for a mistaken judgment or error except on the ground of actual sublation or rejection. This being the case, all the absurd criticisms against doctrines fancifully worked out and paraded as Śaṅkara's own are quixotic passes and thrust against shadows.

—**S. K. Chattopadhyaya**

NOTES

1. G. Misra-Srimanta Pratap Seth Vedanta Lecture 1969, published in his Analytical Studies in Indian Philosophical Problems, Utkal University, p. 4.

2. Ibid.

3. His paper-Śaṅkara's doctrine of Adhyāsa, Ind. Phil. Quarterly Vol. II No. 3 pp. 228–229.

4. Analytical Studies pp. 4–7.

5. Op. cit. p. 9 also pp. 12-14.

6. Ind. Phil. Quarterly Vol. II No. 3.

7. Op. cit. P. 225.

8. Op. cit. 228.

9. Analytical Studies pp. 5-6.

10. Ind. Phil. Quarterly Vol II No. 3 pp. 229–30.

11. Ibid, p. 229.

12. Op. cit. 225 opening paragraph.

13. Analytical Studies pp. 4–5, also Ind. Phil. Quarterly Vol. II No. 3 p. 229 and p. 233.

14. Strangely enough after having worked out this noxious theory as Śaṅkaras own the interpreter has made it into a point of criticism against Śaṅkara. Ind. Phil. Quarterly P. 234.

15. Op. cit pp. 229–230.

16. Op. Cit p. 225.

17. Op. Cit p. 230.

18. Analytical studies p. 5.

19. Ind. Phil. Quarterly Vol. II No. 3 p. 227.

20. Ibid.

21. Six ways of knowing pp. 310–11.

22. Ind. Phil. Quarterly Vol. II No. 3 p. 227.

23. Ibid.

24. Analytical studies pp. 10-11.

25. Ind. Phil. Quarterly Vol. II No. 3 p. 227.

26. Ibid.

27. Op. cit. p. 228.

28. Op. cit 229.

30. G. Misra's paper in the Quarterly referred to already.

31. Analytical Studies p. 5.

32, Ind. Phil. Quarterly Vol. II No. 3 p. 229.

33. S. B. opening sentences.

34. Sacred Books of the East. Vol. XXXIV p. 4.
35, Ibid also G. Misra–Analytical Studies p. 5.
36. Ibid.
37. Ind. Phil. Quarterly Vol. II No. 3. p. 229.
38. His paper in Quarterly p. 228.
39. Op. cit. p. 226.
40. Op. cit. pp. 231–32 compare Tarkabhūṣaṇ's edition of Vivaraṇa-prameya Saṁgraha, Vasumati Sāhitya Mandir, new edition, pp. 125–132 both for explanation of the passage and also for explanation of the relation of Tādātmya (not tādātmyādhyāsa).

PRIVACY AND PRIVATE LANGUAGE

Part I

I. Generally, a distinction is made between different notions of a private language.

(i) There is the notion of a language which is private in the sense that it is understood by one person or a group of persons, for example a code which is adopted by one person to write his views for his private use, or a code which a group of people employ for the exclusive use of that group, as in the army. But this sort of code is not to be identified with private language, rather it is a method of transcribing some given language.

A private language of this sort presents no philosophical problems, for it is dervied from public language; and even if it were not, it will still be translatable into some public language. Its being private is just a matter of enough people knowing how to translate it. A ' private language ' of this sort is not about which philosophers talk, when they talk about private language.

(ii) There is the notion of a private language such that no one other than the speaker could understand it even if all the experiences of the speaker were available to others. This would be a language some features or other of which, irrespective of what the language is about, would make it logically impossible that any one other than the speaker should understand it or follow its rules. Though it is indeed hard to see how a language could possibly be such as to determine logically who should be capable of understanding it, and do that irrespective of what a person's experience were[1]. This too is not the notion about which philosophers talk, when they speak about private language.

(iii) There is the notion of a private language which cannot be taught to or learned by anyone other than the speaker, becaue it is a language which a particular person employs to refer only to his own private experiences. It is often held that a language is public if it refers to what is publically observable; if a person could limit himself to describing his own sensations or feelings, then strictly speaking he alone would be able to understand what he was saying. This is the notion which philosophers in general, and Wittgenstein in particular, have in mind when they talk about private language. That Wittgenstein speaks about this notion of private language in the *Philosophical Investigations*[2] can be seen from the following two passages :

"The individual words of this language are to refer to what can only be known to the person speaking; to his immediate private sensations. So another person cannot understand the language" (PI 243). " .... the language which describes my inner experiences and which only I myself can understand " (PI 256). The 'cannot' used in PI 243 is a logical 'cannot'. A private language is not the language of an imaginary soliloquist (Solitary or in groups) but one whose concepts, rules, and opinions are essentially unsharable rather than contingently unshared. The essential characteristics of a private language thus are :

(*a*) The words of the language are to refer to what can only be known to the speaker.

(*b*) The words of the language are to refer to the speaker's immediate private sensations.

(*c*) Another person cannot understand the language.

2. We are now in a position to give a first approximation of our definition of 'private language' :

Private language is a language that refers to the experiences of which only the speaker is aware and of which it is not merely the case that it is not understood by anyone other than the speaker, but more, that it is logically impossible that it should be understood by anyone other than the speaker. In PI 243 and 256 from which this definition is derived, it is not explicitly mentioned that the private language cannot have a single word in common with public language. But, Wittgenstein suggests this in PI 261.

> What reason have we for calling " S " the sign for a sensation ? For " sensation " is a word of our common language, not of one intelligible to me alone. And it would not help either to say that it need not be a *sensation*; that when he writes " S " he has something —— and that is all that can be said. " Has " and " something " also belong to our common language.

In fact, we may think of a private language having the same alphabets as ours. But having the words of our language is *ex hypothesi* ruled out. For, a word is not merely a collection of letters, but a collection whose use in the language is governed by syntactical and semantical rules of the language. A word can be compared with an atom. An atom consists of a central part called nucleus around which electrons revolve in a number of orbits. Similarly, a word consists of a sign or a sound or a collection of letters around which the rules revolve. These rules are part of the language game to which words belong. In order to understand the language one necessarily has to learn them. For example, it is necessary for one who wishes to learn Hindi that he learns the rules which govern the use of Hindi words.

Just as electrons are the integral part of the atom, so are rules the integral part of the word (or language). And, since a private language, logically, cannot be understood by anyone other than the speaker, therefore its ' words ' or ' expressions ' cannot have public rules[3]. But words of our language have public rules. Therefore private language cannot have any word in common with our public language.

3. We have, now, one more characteristic of a private language, namely, that *it cannot have a single word in common with the public language*. To include this characteristic explicitly, we restate our definition of ' private language ' as follows :

A private language is a language :

(*a*) Which refers to the experience to which only its speaker has a privileged access;

(*b*) of which it is not merely the case that it is not understood by any one other than the speaker, but more, that it is logically impossible that it should be understood by anyone other than the speaker, and

(*c*) which cannot have a single word in common with the public language.

From this it follows that only one person, that is, the speaker of the language alone can be said to know the ' rules ' of a private language. This is so because knowing a language entails knowing the rules of the language.

II

4. Carnap in his study *The Unity of Science*[4] gives the name 'Protocol language' to any set of sentences which are used to give a 'direct record' of one's own experiences. He argues: "In general every statement in any person's protocol language would have sense for that person alone .... Even when the same words and sentences occur in various protocol languages, their sense would be different, they could not even be compared. Every protocol language could therefore be applied solipsistically: there would be no intersubjective protocol language. This is the consequence obtained by consistent adherence to the usual view and terminology (rejected by the author)"[5]. Since Carnap wishes to maintain that protocol sentences should be understood by people, as this is the necessary condition for what he calls a 'physical language', he draws the conclusion that "protocol language is a part of physical language". That is, he concludes that sentences, which *prima-facie* refer to private experiences, must be logically equivalent to sentences which describe the physical state of the subject. There are many other philosophers who have followed him in giving a physicalist interpretation to the statements that one makes about the experiences of others. They however, have not extended it to all the statements that one may make about one's own experiences. They prefer to hold that certain sentences do serve only to describe the speaker's private experiences and that, this being so, they have a different meaning for him from any that they can possibly have for anyone else.

5. Wittgenstein goes much further than this. He holds the view that one who attempts to use a private language not only fails to communicate his meaning to others, but also does not have a meaning to communicate even to himself; in other words, he does not succeed in saying anything at all.

6. Wittgenstein considered that the notion of a private language rested on two fundamental mistakes. They are:

(i) Mistake about the nature of experience; and

(ii) Mistake about the nature of language.

Mistake about the nature of experience is the belief that experiences are private; that is, no one can know that another person is in pain or is dizzy or has any other sensation. For, sensations are thought to be private in the sense that no one can experience or be acquainted with another person's sensations[6].

This mistake leads to the mistake about language, namely, the belief that words acquire meaning by bare ostensive definition; that is, no one can be taught the names of sensations unless he has those sensations himself. On this view, each one of us must give the sensation words meaning from one's own case independently of other people's use of similar words. From this, it follows that anyone who says anything, (or who uses any sound or sign) about his sensations says something which he alone can understand. Therefore, 'names' of sensations or sensation words, the word 'sensation' itself, and the expression "same sensation" will have no public but only a private use.

III

7. According to Wittgenstein, the belief that experiences (sensations) are private rests on a confusion of two senses of 'privacy'. The first sense of 'privacy' has to do with *knowledge*. In this sense, something is private to me if and only if I alone can know about it (vide PI 246). The second sense of privacy has to do with *possession*. In this sense, something is private to me if and only if I can have it. The first sense of privacy may be abbreviated as *incommunicability* and the second sense as *inalienability*. The question 'Are sensations private ?' then, breaks up into two sub-questions :

(i) 'Are sensations incommunicable ?'

(ii) 'Are sensations inalienable ?'

We shall now try to answer these questions one by one.

8. The line of argument of those who hold that sensations are incommunicable may be formulated as follows :

(i) Any one who has a sensation knows that he has it because he feels it; and whatever can be known to exist by being felt cannot be known (in the same sense of 'know') to exist in any other way.

(ii) The proper and necessary means of coming to know what sensations another person is having is to feel (have) that person's sensations.

(iii) No one can feel (experience, or be acquainted with) another person's sensations. Therefore :

(iv) No one can know what sensations another person is having.

Let us call this argument (A). It is clear that premises at (i) and (ii) are the crux of the argument. We shall try to show that (i) and (ii) make a spurious use of the verb ' to know ' and therefore, are false. Since the conclusion stated at (iv) also makes use of ' know ' in the same sense, therefore, this too is false.

9. For clarity's sake, Wittgenstein considers a particular sensation, namely, pain in the argument against the possibility of private language. He takes this example because pain is the commonest sensation and, in many ways, the most difficult of all the sensations to deal with. It is also one of the first such words to be learnt, and one which may well form a basis for the future extension of sensation vocabulary[7].

The premises at (i) and (ii) can, then, be reconstructed as : (ir) Any one who has pain knows that he has it because he feels it, and whatever can be known to exist by being felt cannot be known (in the same sense of ' know ') to exist in any other way. (iir) The proper and necessary means of coming to know the pain another person is having is to feel (have) that person's pain. From these premises, it follows that I can know that I am in pain because I feel my pain, and that if anybody else wants to know about my being in pain, then the only way for him is to feel my pain. These expressions, thus, presuppose that there is a genuine use of the verb ' to know ' as an expression of certainty in the first person psychological statements. This forms the foundations of the argument, since the conclusion (iv) says that no one can know in the sense of first person assertion of ' know ' the sensations which the other person is having. If we are able to prove that this is a spurious use of the verb ' to know ', then we should reject not only (i) and (ii) but also the conclusion of the argument.

10. Consider a case in which ' I know that ' becomes an expression of certainty. It is rainy season. You have come to my place to play chess with me. This game is about to finish. You, while still absrobed in the game, ask my younger brother who is sitting near the window ' Is it raining ? ' He says, ' It is '.

And then you ask 'Are you certain ?' He might reply, 'Yes', I know it is raining, I am looking out of the window'. Now, the function of the words 'I know' here is that in answering the question 'Is it raining ?' one (in this case, my brother) is not merely guessing or taking someone's words for granted, or is not judging from what one saw ten minutes ago, but that he is in a position, as one would want, to answer this question. The addition of the word 'I know' here makes it an expression of certainty, for it is quite intelligible for someone else to suppose that the speaker is not in as good a position as is required for answering the question 'Is it raining ?'

Let us now imagine another case. We have finished the game of chess. It is time for you to leave. You ask my younger brother who is sitting near the window, 'Is it raining ?' You look at him. He opens the window, puts his hand out, and as he closes the window, wiping the drops from his hand says 'Yes, it is raining'. Now, since you have seen him taking the necessary pains to answer your question, you would have nothing to gain by asking 'Are you certain ?' or 'Do you really know that it is raining ?' For the same reason, he would not be telling you anything more by addition of the words 'I know that....' because the addition of the words 'I know' properly means "There is no such thing as a doubt in this case" or "The expression 'I do not know' makes no sense in this case". And of course it follows from this "I know" makes no sense either[8]. Therefore, the addition of the words 'I know' is pointless and redundant. Hence for 'I know that ....' to be an expression of certainty, it should at least be conceivable in some circumstances that the sense of the sentence filling in the blanks allows the speaker to be ignorant of the truth-value of the statements made by the use of the sentence. The addition of the words 'I know' makes sense only when a doubt is possible. In the cases in which no doubt is possible the use of the words 'I know' is pointless. Moreover, we can use 'I know' profitably, only in the cases in which it makes sense to ask the question 'How do you know ?' This question, generally, is asked in those cases in which the question of learning is involved. For example, in the case of 'It is raining', a person can, if he has not seen the speaker taking the necessary pains, before making the reply, ask, 'How do you know that it is raining ?' or 'how do you learn that it is raining ?'

11. In the light of the above discussion, let us now try to see whether the use of 'I know' in the case of first person present tense psychological expressions, for example, 'I am in pain', can be an expression of certainty as is supposed by the premises (ir) and (iir) of the argument.

At the outset, it must be made clear that there are some non-philosophical contexts in which 'I know, I am in pain' is not unintelligible. For instance, a man has been complaining for several days that he has a severe pain in his throat, but has not sought any relief from it. His wife has been constantly nagging him "you're in pain; so why not see a doctor?" He may sometimes say to her in exasperation, 'I know, I am in pain, but we cannot afford a doctor'. No one would like to maintain that this expression of exasperation was unintelligible. What we want to show however, is not that words 'I know' in the first person psychological sentences can be used as an expression of exasperation, but that they cannot be used as an expression of certainty.

Now, for 'I know' to qualify as an expression of certainty, the following conditions should be satisfied :

(i) There could, in principle, be a doubt about the ignorance of the speaker about the truth-value of the statement expressed by the sentence attached with it, that is, there could be a doubt about the assertion.

(ii) The question 'How do you know ?' could be asked about the contents of the sentence attached with 'I know'; and, an answer could be given to this question. For example, in the case of 'It is raining', one can ask 'How do you know?' The answer can be 'I know, because I see from the window that it is raining' or that 'my hands became wet, when I put them out of the window'.

However, in the case of first person psychological assertions, for example, 'I am in pain', there cannot, in principle, be a doubt that the speaker of these words is ignorant about the truth-value of the contents, viz. his being in pain. He knows, when he says it, whether he has a pain or he is only saying it without having the pain. A doubt can arise in those cases only in which one is learning. For example, in the case of continuing the series 1, 3, 5, 7, 9, ..., one can doubt not only whether the persons has learnt how to go on but also whether he himself shall be able to go on correctly.

But the case of sensations is different. In their case "I cannot be said to learn of them. I have them" (PI 246). And I cannot doubt those things which I have. For example, I cannot doubt whether there is a pen in my pocket if I have it in my pocket. "It makes sense to say about other people that they doubt whether I am in pain but not to say it about myself" (PI 246). For other people this (doubt) makes sense, because they learn of my being in pain either from my behaviour and/or from my sincere utterances of the words 'I am in pain'. But in my own case it does not make sense, because I do not learn of them, I have them. As in the case of 'It is raining', it makes no sense for the person who sees from the window or who is walking in the rain to doubt whether it is raining.

12. To further clarify our position let us look at the way we teach a child the usage of the word 'pain'. A child whenever he has pain cries; the adults who already know 'pain', after looking at the symptoms of pain, tell him to use the word 'pain', whenever he has pain which he expressed by crying previously. The word 'pain' replaces the primitive natural expression of pain, that is, a cry. Thus the sentence 'I am in pain' instead of being a description of a mental state, is more like a cry of complaint (vide PI, page 189, part ii). Since 'I am in pain' is like a cry of complaint therefore 'I doubt whether I am in pain' is senselss in the same way as 'I doubt whether ouch'; or 'I doubt whether Hurrah'. In the situation in which it is senseless to say 'I doubt whether....' it always is equally senseless to say 'I know that....'. This can be seen if we compare 'I am in pain' with an order, an exclamation or a wish; e.g., 'Shut the door'; 'Good Morning;', or 'Hurrah;'. 'I doubt whether good morning' is as senseless as 'I know that Good Morning', and 'I doubt whether shut the door' is as senseless as 'I know that shut the door', and 'I doubt whether Hurrah' is as senseless as 'I know that Hurrah'. Because in the case of 'Good Morning;' it is not just psychologically, but logically impossible to doubt whether Good Morning. Therefore, it does not make sense to talk of knowledge and certainty of Good

Morning. Similarly, in the case of 'I am in pain', It is not just psychologically but logically impossible to doubt whether I am in pain. Therefore, it is senseless to talk of knowledge and certainty of 'I am in pain'.

13. Since it is out of place to talk of knowledge and certainty in the case of 'I am in pain', the question 'How do you know?' also becomes senseless. For, a question can sensibly be asked when there is a context of knowledge or learning. For example, in the case of continuing the series, 1, 3, 5, 7, 9,.... we can ask 'How do you know?' The answer can be 'by working on the formula $a + (n - 1)d$'. But in the case of 'I am in pain' the question 'How do you know?' cannot be asked. For it can be asked in those cases only in which a doubt exists; and in which "an answer exists and an answer (can exist) only where something can be said" (TLP, 6.51). We have already seen that there is no place of doubt in the case of 'I am in pain'. And what sort of answer can we imagine to the question 'How do you know that you are in pain?' The difficulty in answering this question is analogous to the following example :

> If a blind man were to ask me "Have you got two hands?" I should not make sure by looking. If I were to have any doubt of it, then I do not know why I should trust my eyes. For, why should not I test my *eyes* by looking to find out whether I see my two hands ? *What* is to be tested for *what*? (Who decides what stands fast).
>
> And what does it mean to say that such and such stands fast? (OC 125)

In fact, in 'I am in pain' there simply is not the question 'how' as in 'why do I not satisfy myself that I have two feet when I want to get up from a chair ? There is no why. I simply do not. This is how I act." (OC 148)

14. However, one of the answers that may be suggested to the question 'How do you know that you are in pain' is 'I know that I am in pain by feeling it'. Let us now consider this answer. We shall concentrate on the grammar of the verb 'feel'.

There is a perceptual sense of the verb 'to feel' as in 'I feel a stone in my shoe'. But, when we use the verb 'feel' in the first person psychological assertions, e.g., in 'I feel a slight pain in my knee when I bend it', it is not used in the perceptual sense; for the words 'I feel' can easily be substituted by the words 'there is' or 'I have'. Such a substitution is not possible in the case of 'I feel a stone in my shoe' by 'There is a stone in my shoe'. While the former implies the latter, it does not mean the same. Whereas the assertion, 'There was a stone in my shoe but I did not feel it makes sense, the assertion 'There was a pain in my knee but I did not feel it' makes no sense. Further, If we try to answer 'How do you know that you are in pain ?' by 'Because I feel it', then we enter into a vicious circle, and give no explanation at all. As Wittgenstein put it :

> "How do you know that you have pain ?". Because "I feel them". But I feel them means the same as "I have them". Therefore, this was no explanation at all" (BB p. 68).

In fact, our knowing that we are in pain is sufficient criterion for our knowing that we are in pain. As can be seen from the following parallel example :

> "How do you know that you have raised your arm ?"— "I feel it". So what you recognise is the feeling ? And are you certain that you recognise it right ?— You are certain that you have raised your arm; isn't this the criterion, the measure, of recognition (PI, 625).

The reason for entering into this vicious circle is that when we ask 'how' we make a mistake of looking "for an explanation where we ought to look at what happens as "Proto-phenomenon'. That is, when we ought to have said : *this language game is played*" (PI 654).

We have been able to show that the sensation words cannot be the objects of the verbs of perception in the first person psychological statements. Therefore, the arguments given by those who hold that sensations are private in the sense that nobody other than the one who feels them becomes quite unplausible.

15. In our discussion so far, we have shown that the alleged use of the expression 'I know' as an expression of certainty is a spurious use. It follows, then that the premises (i) and (ii) of the argument (A) are false. Since the conclusion at (iv) also makes use of the same sense of 'know' that (i) and (ii)

do, it also is false. In the ordinary sense of 'know', people know when I am in pain and also I know when other people are in pain. This can easily be seen from our day-to-day experiences when we pass judgement on the 'inner states' of others and are right. Judgements of this kind depend upon the good evidence available to us.

One of the reasons for he sceptic to say that we can never pass correct judgements about the 'inner states' of others is the possibility of pretence, or shamming by other persons. To this, Wittgenstein would reply that some types of behaviour cannot be said to fall under the concept of pretending or shamming. One's ground for judgement of such acts can be empirical. For example, there can be no doubt of pretence about the pain of a man who after being crushed under a car is lying in a pool of blood and is crying 'I am in pain'.

Pretence or shamming which characterise the pretended action for example, pain behaviour, is an acquired skill. Only those who are already familiar with the forms of behaviour, can pretend to have pain when in fact they do not have it. Since infants and animals lack the mastery of those skills, the supposition of pretence is senseless in their case; and "to suppose that all behaviour might always be pretence is to suppose that the concept of pretending might lack behavioural criteria and that is not possible" (Z 571). Or as Ryle puts it :

> The menace of shamming is an empty menance. We know what shamming is. It is deliberately behaving in ways in which other people behave who are not shamming.[9]

16. Now, the sceptic may say, 'Granted that I can know 'inner states' of others. Can I know them with the same certainty with which I know other things?' To this the reply is "I can be as *certain* of someone else's sensation as of any fact" (PI Part II, P. 254). This certainty is of a different kind from the one expressed in the propositions '25 × 25 = 625' and '3″ × 18″ would not go to 3′. The difference is not psychological but logical. The feeling of certainty, the absence of doubt, may well be the same. The criterion for our feeling certain about a matter lies in our behaviour, and so far as that is concerned

we are no less certain in general about the "inner states' of others than about the mathematical judgements of the sort 'Twice two is four'.

The sceptic confuses the logical kinds of certainty, for instance, the deductive proof of the justification of a mathematical theorem, with the different kinds, or a degrees of psychological certainty. He forgets that mathematical certainty is not a psychological concept. And that the kind of certainty that is required in different language games depends upon the kind of language-game involved, e.g., the kind of certainty required in continuing the series 1, 2, 3,.... upto 10 is my success in continuing it (cf. PI, Part II, P. 224).

To sum up: we have so far shown that senstations are not incommunicable; that is, we can know when others are in pain or what sensations, if any, they are having, and also that others can know what sensations, if, any, I am having.

IV

17. Let us now turn to the inalienability sense of 'privacy' according to which my sensations are private to me in the sense that only I can have them. This sense is expressed in the premise (iii) of the argument (A) where it is said that 'No one can feel (have) another's sensations'. Here Wittgenstein asks two questions :—

(i) "Which are my pains ?"

(ii) "What counts as criterion of identity here ?" (PI 253).

The first question is a request for the criterion of possessing pain, whereas the second question asks for the criterion of identity of pain.

The question (i) is like the question about a material object, e.g., 'which is my room ?' 'which is my table ?', 'which is my coat ?' The answers can be 'The room near the staircase on the third floor is your room', 'The table near the window in that room is your table', and 'The second coat in the wardrobe is your coat'. In such questions, therefore, the spatial location of the material object provides, in general, a principle of individuation for the object in question. Thus, in reply to the question (i), one is apt to answer 'my pains are the pains felt in my body', or 'Any pains which I feel are my pains'. This is the answer against which Wittgenstein constantly argues. According to him, it rests on two mistakes :

(i) It supposes that this is a truth about the nature of pains or of human beings, that only one in whose body it is located can feel it.

(ii) It supposes that the word 'mine' is a possessive of ownship as 'my' in 'He has my coat'.

18. Against the first mistake Wittgenstein argued repeatedly and held that one could quite conceivably feel pain in someone else's body[10]. That the first supposition is a mistake, and that one can feel pain is someone else's body can easily be seen from the following consideration : It is perfectly conceivable that one could feel pain in someone else's body. There is no logical contradiction involved in it. Further more, in actual life and language we do come across cases where such locations are meaningful. For example, when I see a man crushed under a car and bleeding profusely, I say, 'Oh ! It is painful'. I say the same thing when a man with an injured left hand comes to me. But, when I am asked to touch the spot of pain, I touch the injured part of the person who has been hit by the car or the left hand of the person in the latter case. This would naturally be the pain felt in another's body. So my pain is not necessarily the pain felt in my body. The criterion of ownership of pain, therefore, is not given by the location of the pain in the body, but by the pain behaviour of the person who gives it expression. *He who manifests pain is its owner.* And, the pain which I manifest may single out a place outside my body.

19. Let us now consider the second mistake. 'My pain', 'His pain', 'Your pain', look like possessive of ownership because of the surface similarity with 'My coat', 'His coat', 'Your coat'. But this analogy is false; because in order to use a possessive of ownership as in 'His coat', 'My coat', and the like, and to make true statement, we must identify correctly the owner of the article. It is this identification which makes a difference between 'His coat is too large for him' and saying that 'That coat is too large for him'. If I had without identi-

fying correctly said ' His coat is too large for him ', then I could be corrected by saying ' That is not his coat, it is his father's '. Here ' He ' and ' His ' are not performing the same function. ' He ' shows the person, whereas ' His ' shows the onwner, the possessor.

In the case of sensations, in order to be in a position to use correctly the expression ' his sensations ' it is sufficient to know who is in pain. There is no other step required comparable to that of the correct identification of the owner as in ' his coat '. In fact the question of identification does not have a place in the language game :

> There is no question of recognising a person when I say I have a tooth-ache. To ask ' Are you sure that it is *you* who have pain ? " would be non-sensical. Now, when in this case no error is possible, it is because the move which we might be inclined to think of as an error a ' bad move ' is no move of the game at all. (We distinguish in chess between a good and bad moves, and we call it a mistake if we expose the queen to a bishop. But it is no mistake to promote a pawn to a king. (BB 67).

In the case of sensations, the talk of correct identification of the possessor is senseless (non-sensical), not because a particular combination of words is ruled out in the language-game, but because an attempt is being made to make a move with the help of this group of words in a language-game whereas it in fact belonged to the other language-game. As Wittgenstein is said to have remarked :

> Where we say ' this makes no sense ', we always mean ' This makes non-sense *in this particular game* '; and in answer to the question ' why do we call it " non-sense " ? ' ' What does it mean to call it so?' said that when we call a sentence ' non-sense ', it is ' because of some similarity to sentences which have sense ', and that ' non-sense always arises from forming symbols analogous to certain uses, where they have no use '[11].

Moreover, in ' My pain is quite severe ', the word ' My ' is performing the same function as ' I ' in ' I am in severe pain '. But as we have seen in the case of possessive of ownership, ' My ' and 'I' are to perform different functions. Therefore, the word 'mine' in 'The pains that I have are mine' is not the possessive of ownership. Hence 'The pains that I have are mine' can be replaced by 'my pains'. Thus the word 'my' in 'my pain' is not to be thought of as a possessive of ownership.

If the question 'which are my pains?' prompts us to answer it by saying 'Any pain that I have is mine', then both the questions and the answer should be recognised as spurious, as not belonging to the language-game. 'My pains' (not in the sense of possessive of ownership) are the pains which I express, or perhaps the pains which if expressed would necessarily be expressed by me (Cf. PI 302).

20. The question 'what is the criterion of identity for pains?' implies 'How are the pains, such as toothache, headache and others distinguished from each other?' The answer is : By their phenomenal characteristics like their intensity and location. If these phenomenal characteristics are the same, then it is possible for both of us, or for that matter for all of us, to have the same pain. For example, if both of us feel a sharp pain in the upper abdomen an hour after taking the same food, then it is perfectly natural for both of us to say that we have the same pain.

It may be objected that this is not absolutely correct, since the pains are not felt literally in the same place but only in corresponding places in two different bodies. To this Wittgenstein would reply that it is possible for the Siamese twins to have the pain exactly in the same place, namely, the place where they are joined together. Besides, it is not in the least logically incorrect to say that two persons have pain in the same place. Here, it may again be objected by a sceptic that pains are not specifically the same in the sense that they are numerically different; for one is Tweedledee's pain and the other is Tweedledum's pain. But we point out, this is making the possessor a chasacteristic of pain which, as we have shown above, is a mistake. Therefore, the criterion of counting pains as 'My pains', 'His pain', 'Tweedeldee's pains', 'Tweedledum's pain' is wrong. When one counts pains one counts differently. One counts in a way in which he counts habits, gaits and the like, we count in these cases with more or less detailed descriptions. This can be illustrated by taking the following example.

A five gaited horse is one that can embulate in five descriptions of foot movements; and two horses have the same gait if these foot movements fit the same relevant description. To say that they are performing two gaits which are exactly alike does not make sense. What would count as two gaits is some difference in the foot movements of two horses. Similarly, a person has the same pain, if he fits the same (relevant) description; and if hundred people fit the same description then all of them have the same pain.

21. The confusion about identity lies in the mistake to think that the same is same; that the use of the word ' same ' is governed by the same fixed rule irrespective of the context; whether we may be talking of ' coats ', ' tables ', ' pains ', ' gaits ', or ' sensations '. This is the mistake made by Ayer when he wrotes : " physical objects are public because it makes sense to say of different people that they are perceiving the same physical Object; mental images are private because it does not make sense to say of different people that they are having the same mental image, they can be imagining the same thing but it is impossible that their respective images should be literally the same "[12].

The talk of ' literally being the same ' makes the use of the word ' same ' as if it had one and the same meaning in all contexts. The mistake lies in not seeing the ' same ' must always be understood not in an abstract and pure sense but together with some general term such as pain, or coat, and that the criterion of identity in any particular case is determined by the general term involved. For example, when we talk of the identity of chairs (physical objects), we use ' same ' and ' exactly alike ' interchangeably, as in 'This chair is identical with that ', ' This chair is exactly like that, or ' This chair is the same as that '. Here we are talking of two chairs. When we talk of the identity of physical objects we talk of two or more things. But, in the case of the identity of colours, when we say ' This colour here is exactly like the colour over there ' or ' This is the same colour here as over there ', whichever of them we say, there is but one colour say red and it would be a mistake to say ' There cannot be only one colour there '.

The case of pains is not like physical objects but is like colours. To assimilate pains to physical objects is to make a ' category mistake '. It would be a mistake to think that when we talk of two people having the same pain, say pain in the upper abdomen, 'same pain' here means 'two pains being exactly alike'. As Wittgenstein says : "In so far as it makes *sense* to say that my pain is the same as his, it is also possible for us both to have the same pain" (PI 253). Therefore, only I can have my pains.

The statement 'only I can have my pains' is equivalent to 'if they are my pains, I have them'. But this is an analytic statement like "one plays patience by oneself" (PI 248). Therefore this statement is comparatively uniformative about pains. Moreover 'Only I can have my pains' is not true particularly of pains but of many other things besides pains, e.g., blushes, sneezes, catches and the like. If you blush, then surely it is your blush, and if you sneeze, then surely it is your sneeze, it is not mine, nor of anybody else's. If on the cricket field the catch comes to mid on position, the position at which you are standing, then surely it is your catch and not mine or of any other player's. If somebody wants to maintain that blushes and sneezes are inalienable in this sense, then this is a very tenuous sort of privacy, and so is the case with the one who maintains that sensations are inalienable. This, however, does not make senations any more private than behaviour.

23. Someone may still object and say that there is one sense in which pains are more private than behaviour, namely, that they can be kept secret without being publicly manifested in anyway. If one wants to call on experience thus kept to oneself private, for example, a chess move considered and discarded in imagination then there clearly are such private expreiences. Nobody including Wittgenstein denies this sort of privacy to experience. From this, it follows that there are some experiences which are private because, they are kept to oneself. But the fact that there are some such experiences does not entail that all experiences are private in this sense. If a man itches, but does not scratch or report his itch, we may call that a private experience. But, if he scratches or reports his itch, there is no reason for us to call his itch private. So in this sense of 'private' some of our pains are private and the others are not. And, from the mere fact that some pains are private we can not conclude that all pains are private. "What sometimes

happens could always happen " is a fallacy (cf. PI 345). "Some money is forged but it could not be that all money was forged "[13]. These considerations are, thus, sufficient to prove the thesis that sensations have no special inalienability.

24. We have shown above that our answer to the question 'Are sensations incommunicable ?' is 'No', not in any sense peculiar to sensations'. These two questions were part of the question 'Are sensations private ?'.

Since our answer to both is in the negative, the answer to the question 'Are sensations private ?' is also in the negative. It follows that our experiences are not private. It is quire possible for people to know that another person is in pain or is dizzy or has any other sensation.

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NOTES

1. cf. Jones, O. R. (ed.) *Private Language Argument*, Macmillan St. Martin's Press, 1970, Introduction.

2. Translated by G. E. M. Ascombe, Basil Blackweel, 1968, Third Edition, henceforth to be referred to as " PI ".

3. It may appear, from this, as if there can be private rules in a private language. But I shall argue in the course of this paper that there can possibly be no rules which are followed privately for the expression 'private rule' itself involves a category mistake.

4. London, 1934.

5. *Ibid*, p. 80.

6. *cf.* Kenny, Anthony, *Wittgenstein*, Allane Lane, The Penguin Press (1973) p. 185.

7. *cf.* Manser, Anthony, " Pain and Private Language ", *Studies in the Philosophy of Wittgenstein*. (ed.) Peter Winch, London; Routledge and Kegan Paul 1969, pp. 166-84.

8. Wittgenstein, L., *On certainty* ed. By G. E. M. Ascombe and G. H. Von Wright, translated by Dennis Paul and G. E. M. Anscombe, J. & J. Harper Editions, New York and Evanston, henceforth to be referred to as OC, 58.

9. cf. p. 166.

10. *The Blue and Brown Books*, Basil Blackwell, Oxford 1960, henceforth to be referred to as BB", pp. 49–55.

11. Moore, G. E. " Wittgenstein's Lectures in 1930-33 ", *Philosophical papers* London : George Allen and Unwin, 1959, pp. 273–74.

12. *The Problem of Knowledge*, Penguin Books, 1956.

13. Wittgenstein L, " Private Experience," (ed.) Rush Phees, *Philosophical Review*, LXXVII, 1968, p. 314.

ON THE FRONTIERS OF MICRO-PHYSICS AND METAPHYSICS

Recent discoveries in sub-atomic physics, are imperceptibly drawing it to similar metaphysical concepts. An Einsteinian physicist, while looking beyond Balck Holes, found that matter is so aged and compressed, that nothing excapes from it, not even radiant energy. In the outer reaches of the universe, time does not exist and material is constructed out of non-material. No time, no mass, no dimensionality. This sounds familiar to what the Upaniṣadic seers have been saying about ultimate Reality. Present day science is based on the materialistic view of the universe. But would it be wrong to hold that the universe is spiritual in nature, where there is no mass, and no time, but all is a plenum of spirit ?

Theoratically, this universe is a manifestation of ultimate Reality, as explained by the doctrine of superimposition. Ultimate Reality is spiritual. It is Absolute Experience. It appears as Sat-Existence and Cit-Thought. As Cit, it becomes Cit-śakti, when, by superimposition or Vivarta, it appears as many. Then, the category of number becomes applicable to it. Innumerable selves or quanta of cit-śakti appear at this level.

The concepts of mass and energy appear at this level. They pre-suppose multiplicity. There is no absolute mass or absolute energy. They are relative concepts depending on each other. Energy is spiritual power. This identity of cit and energy is not based on verbal similarity. The motive force or impulse in energy, split up into multiplicity, consists in its drive to Perfection. It has an inner urge to return to the perfect spirituality of the Absolute.

All the energy in the universe possesses this urge. If the intensity of the urge is different in different things, it is a difference of degree only. In so called matter, it is latent. It is latent in the atom and patent in the mind of man. These quanta of spiritual energy have a position but no magnitude. This energy has a free-will. It is derived from the freedom of ultimate Reality. This is the common factor between spiritual units, namely the selves, and particles in micro-physics. It is this common indeterminism that makes us equate the two. This indeterminism in primary energy is fatal to scientific determinism. Scientific laws are statistical averages. They do not apply in particle physics, that stands between spirit and matter.

When electrical energy begins to evolve because of this inner urge to perfection, it divides into two, the positive and the negative. Not all the particles are charged with electricity, some, like the neutrons are without positive or negative charge. Energy takes various forms. Radiant energy is one such.

In the atom, the proton at the centre is charged with positive energy. The negatively charged particles, the electrons, revolve round it with speed. Some of them jump out of their path at will and change their position. This change in their position is the source of qualitative variety in the universe.

The things in this universe have attributes like magnitude, number, divisibility and velocity. Things have positions out of which arises conceptual space or universal extention. Points have a position but no magnitude. Yet lines arise out of points. They appear as extended in space. This is due to the relative position of atoms in space-time continuum. Spirit is the essence of all things in the universe. Such things have primary qualities. One such quality is mass. It is the essence of matter. It has volume. All space is filled with mass. Space without mass is unthinkable. The weight of things depends on the expansion and contraction of mass. A thing is heavy because its mass is compressed. But mass is related to energy. Their equivalence is shown by the equation $M = EC^2$.

Mass is bound energy. Other energy is free and unbound. But both are ultimately energy. If mass moves at the velocity of light it gets transformed into energy and at that speed time comes to a stand-still. As mass ceases to be mass at one speed of light, energy, automatically ceases to exist, there being no absolute energy, as there is no absolute mass. With the disappearance of mass, there is no space, as space without mass is unthinkable. Time being a component of space-time continuum, also vanishes.

These concepts are reciprocal and mutually dependent on each other. Time and space depend on duality of mass and energy. When this duality ceases, they also cease to exist.

Sub-atomic physics is the link between physics and metaphysics. Laws of physics do not apply to sub-atomic particles. That province is yet to be explored by science. For obtaining further information of neutrons, apparatus has been provided in the satelite recently put up in orbit, by India. At the atomic level, the revolving electrons are never completely drawn to the centre. Similarly two atoms do not completely merge. There is some counteracting force in each atom that prevents it from merging. But fission of the atom releases enormous amount of energy. The release of solar energy and transformation of hydrogen into helium are explained by sub-atomic physics. This process of radiation of energy and contraction of mass is simultaneous and is going on continuously. In this process new chemical elements come into existence.

On the atomic plane the law of uniformity in nature generally prevails. But even here the chain reaction in fission is made possible by one particle lagging behind, when atom is broken. Science can not predict before hand which of the particles will thus lag behind. To this extent, indeterminism prevails.

The upshot of the examination of concepts of mass, energy. space and time made so far shows that they are reciprocal. As there are infinite number of selves but no Absolute self, there are no Absolute mass or Absolute energy, as Absolute energy has no inner urge. Time has also no independent existence as, being a dimention of space, it disappears with the disappearance of space, along with that of mass, as space exists only so long as it is filled with mass.

What is the relation between mass and energy on the one hand and time and space on the other ? Mass and energy are relative to space-time continuum. It is filled with mass and energy as well as the quanta of spiritual energy, viz., selves. Just as there are no Absolute mass and Absolute energy, so also, there are no infinite space and eternal time. Time and space are not like an empty pot, containing mass and energy.

Mass is bound energy. At velocity of light it gets converted into free energy. The principles of conservation of mass and energy bear testimony to each others' existence but are silent on the existence of Absolute mass or Absolute energy. So also time and space that are relative to mass and energy, collapse when mass and energy cannot be shown to be Absolute.

These concepts of Time and Space and mass and energy are working concepts of science in this finite universe. But they cannot aspire to be Absolute. Ultimate Reality is beyond them and abides for ever in its Perfection as Absolute Experience.

Yet, it is worth-while seeing, how an insubstantial thing like energy contributes to the formation of this universe. The theoretical side of $M = EC^2$ leads to the elimination of mass and energy, when the velocity of mass is equal to that of light. But if this velocity is less than the speed of light, the three dimentional space and time emerge out of space-time continuum. They get split up into two at slower speed. We lead our daily life in this reality of space and time.

According to Einstein, molecular matter in the universe is not capable of attaining the speed of light. The primary quality of such matter is mass. Things with their respective masses co-exist in this universe. These space and time components are the essence of Einsteins' space-time continuum. They are not conceptual space and time, which are mathematical constructs. We must descend down from these to the material world. Mass is the essence of matter. It is bound energy. It attains weight in three dimentional space. Weight is dependent on gravitation.

The Absolute transcends space as there is no duality and multiplicity in it. Space is relative and relational. The Absolute Experience is also beyond time as it is beyond relations. Time is subsequent to duality but prior to mind. There is no change or movement in it. There is also no place for position or dimentionality in it. It is beyond the category of number. It is not like a point, having position. Time, space and mass are dependent on duality and number. Where there is duality, one can feel the existence of another, though one can't occupy its place. Perceptual time of each will depend on the intensity of each one's expectation. Each one's time will have a unique length due to this intensity. It will move slow or fast according to the degree of intensity. It will vary from man to man, as it will vary for the same man, according to his moods. Time is measured in terms of space. Thus time and space are relative. Time is the fourth diemntion of space, as shown by Einstein.

If the mass of this universe rotates round itself, at the speed of light, without friction, it will be transformed into Energy. Time will then mark time. Energy will cease to be active energy. In the terminology of the Sāṁkhya philosophy it will be in a state of equanimity. In this universe, Energy takes many forms. One such form is that of electricity. The primary form of this energy, that controls the protons and the electrons, manifests itself at very high energies. If at that temperature protons and electrons are bombarded with six different kinds of particles, they react in the same way. This shows that the difference in their character as positive and negative is only apparent, and their underlying energy is the same.

The inverse square law of force does not apply at the sub-atomic level to protons and electrons as it applies to them at the atomic level. Einstein has shown that in gravitation both protons and electrons give identical reaction, though they behave differently in the electro-magnetic field. Gravitation is different from electro-magnetism. It is not equally intensive. In it the attractive force is weak. But it is one kind of energy. A time may come when, both the fields are unified. Einstein has shown that gravitation is a function of space-time continuum when things in it are attracted towards each other, curvature of his continuum keeps them apart. Instead of gravitation increasing, this carvature introduces a steady state.

Gravitation is continuous. It differs from other forms of energy, as it is a negative field of energy. In this expanding universe, as energy is dissipated mass shrinks. It becomes more and more negative, the more energy is taken out of it. In the end by this simultaneous expansion and contraction, the universe reaches a steady state.

Science has as yet not reconciled the different forms of energy. For the present, it has arrived at the steady state of the universe. But this theory may be exploded at any time. In science there is no last word. In metaphysics, Absolute Experience is the first and last word, the alpha and the omega. Scientific theories will go on making asymtotical appraoach to it. But will science be able to reach the ultimate Reality without transcending its limitations ?

Poona.

M. D. Vidwans

THE MONIST

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REVIEWS :

K. Satchidananda Murty : *The Realm of Between, Lectures on Philosophy of Religion*, Simla, Indian Institute of Advanced Study, 1973, xv, 221 pp., Rs. 25.00.

The author of *The Realm of Between* is well known for his numerous publications in English and in Telugu. After many years of service in Andhra University, he has now become Vice-Chancellor of Sri Venkateswara University, Tirupati. His works have earned him frequent praise and provoked occasional criticism. A group of professors of Andhra University has published recently these appreciations in a special volume : *Collected Criticism of K. Satchidananda Murty*, (Machilipatnam 1, Trivedi Publishers, 1975, xiv, 227 pp., Rs. 18.00). I need not then make an effort to situate the present book in the complete works of Dr. Murty. I shall only mention what we find in *The Realm of Between* and comment on some points.

The book has its origin in three lectures delivered in Oxford and in London, in 1963, and found its more complete form in a set of lectures delivered at Simla in 1970. It deals with " the realm of between ". The phrase is of Heidegger, but has many equivalent renderings in Indian thought. The realm of between corresponds to Jaspers' *limit-situations :* suffering, salvation, religious action. It deals also with some problems of what is here called " transcendental philosophy " or philosophy of God.

In Part I, the theme of " Suffering " is developed through a kaleidoscopic presentation of quotations of Eastern and Western writers, be they poets, philosophers, or religious men. One is thus made to share vividly in the anguish of people who have suffered much or have been very sensitive to the suffering of others. The suggestion, at the end of the chapter, that a bit of " concerted and rational human action can increase the sum of happiness in the world " (p. 26) is no doubt a pertinent one. Nevertheless, it leaves the problem unsolved, since precisely the problem of suffering lies in the fact that, in spite of one's effort, suffering sometimes afflicts the holiest or most reasonable person. The reference to Leibniz's optimistic solution of the problem of suffering can hardly be said to be " the last word a theist oriented by Greek and Christian thought can say in justification of suffering" (p. 15). Leibniz's view may be an extreme view of it, but it is far from being the best or the most common view among Christian theologians. Christian authors who after Leibniz have written on the problem of evil have almost unanimously rejected his solution, as much too rationalistic. So did recently Maritain, Journet and Sertillanges in their important studies of the problem of evil.

The theme of "Salvation" is developed in the same kaleidoscopic manner. Most of the solutions given in the East and in the West are exposed briefly. In the end, Murty points to seven possible attitudes one could take before so many positions. This is the part of the book where the reader is led to admire most the erudition displayed in the presentation of so many views, but is least helped to choose any. Even the text of Kafka quoted at the head of the chapter seems too optimistic. It says : "There is a goal, but not way : what we call way is only wavering." On reading this chapter written with such cold impartiality, one does not know even what is the goal, which salvation one should hope for !

In Part III, "Religious Action" is defined as "responsive action towards the supernatural". (p. 83). If this action is done ritually, it becomes a sacrifice. The illustration of what sacrifice is or should be is mostly taken from the Indian tradition, with only secondary references to Socrates, Epicurus, Kant and Heidegger. "Surrender of all that one is to God.... that is the highest sacrifice." (p. 103). This is the Gita view and the most appealing. The author does not impose any view but at least here he lets us feel that this is the best.

In Part IV, on Transcendental Philosophy or the Philosophy of God, the work of Murty takes more definitely the shape of the philosophical discussion of a precise issue : Is there a God or not ? Here, the views of European philosophers are given a longer exposition than the views of the philosophers of the East. Anselm, Aquinas, Kant, Hegel, Marx and Pascal are made to speak for or against God's existence. Murty notes well that Aquinas already had criticized Anselm's argument and that one had not to wait for Kant to do this. Murty goes a long way to defend Aquinas' argument and to accept that there should be a first cause. Yet, he adds, this is not yet the proof of an absolute Spirit or Personality (p. 146). Would not the linking of the First Way of Aquinas with the Fifth Way make a complete argument, because in the Fifth Way it is a supreme Intelligence which is required? I found rather surprising Prof. Murty's readiness to go along with A. E. Taylor who wrote: "It does not seem that anything new in principle has been added either for or against theism since Kant" (p. 155). This is really to make too little of what goes on in contemporary philosophical theology. It brushes asides the works of Bergson, Blondel. Marechal, Lonergan and so many others, to say nothing of the numerous works on Religious Language published in England and America. Very serious attempts have been made in this century to justify the metaphysical principle of causality and use it to prove God's existence. The new Hermeneutics of Gadamer, Ricoeur, etc..... surely contains fresh insights and new approaches to theism.

A point to which Prof. Murty returns several times is that belief in God's existence is not required for one to adopt an ethical attitude. The point is well made and may be well taken. It serves at least to instill greater respect for the atheist. It serves also the purpose of preserving a basic sense of value and purposefulness in life for one who would not be so sure of his theistic convictions. But this does not cancel the fact that the moral order gets a stronger backing when it is seen in its theological perspective.

It is this theological perspective which, after long hesitations, seems to prevail, especially in some of Murty's criticism of the Death of God theology. He concludes with a curious quotation of Nietzsche which is an admission of the faith: "That God is truth and truth is divine" (p. 212).

Jnana Deepa
Poona 14.

J. de Marneffe

INDIAN LINGUISTICS

Journal of the Linguistic Society of India,

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Payments and Advertisements : Dr. Amar Bahadur Singh, Secretary, Linguistic Society of India, C/o Deccan College, Postgraduate and Research Institute, Poona 411006 (India.)

Gole, (Dr.) Leela : *God as the Supreme Value :* Analysis and Interpratation of the Idea of God from the Standpoint of Value; University of Poona, Poona, 1974, Price Rs. 20/–.

The development and growth of Philosophical Analysis and Formal Logic sharpened the tools of philosophical inquiry and investigation. With the help of such sharpened techniques and tools attention came to be focussed in modern times, on three areas of philosophical consideration, namely, Philosophy of Science, Philosophy of Religion and Philosophy of Mind. The author of the book, however, considers that ' Philosophy of Value or Axiology ' is one more important and prominent sphere in the direction of which philosophy developed in modern times. One may not have any objection to this. " The study mainly deals with ", the author tells us, " the problem of nature and gradation of values, with a view of deciding the nature and significance of the idea of God as the Supreme Value. As such, it is ethico-religious in character. The point of view underlying the argument presented, may broadly be characterized as Axiological Absolutism ". (Preface). The whole programme that is envisaged is to provide for a reconsideration of " the idea of God as the Ultimate Reality and Harmonizing Principle " (Preface). Such Religious Reality is yielded by Mystical Experience into which philosophy and religion culminate. The work does not and did not (the sense of the past tense will become clear as we proceed) claim any originality. Nor does it seek to defend any specific religion. It is " a tentative attempt to discover the truth underlying the Idea of Deity from a value-standpoint." The only kind of originality that the work claims, is " a new arrangement and a slightly different way of tackling the same age-old problem. . . . " (Preface).

The sole aim of stating the central centention of the work in the words of the author herself is to be as faithful to the author's intention as possible. The present work was submitted as a Ph.D. Thesis to the University of Poona and was accepted for the award of the Degree in 1959. The study is now published by the University with the help of a Grant by the U.G.C. Although 15 years have elapsed between acceptance and publication of the thesis, the author has "kept the original work substantially as it is" (Foreward). Yet the author has taken sufficient care, it is claimed, to make "necessasy modifications that were required to correct minor slips in thinking" and to "supplement the argument in a few places" (Foreword). Here one may ask : why did the author not rewrite the whole work ? For, although she maintains that her "basic position concerning the Idea of God is almost the same, even today", she would have adopted "a somewhat different mode of exposition" (Foreward) were she to write the thesis again. She also maintains that "while preparing a final press copy of the thesis", "some suitable changes in the thesis" were made "so as to make it up-to-date". The other precaution that was taken, while preparing the press copy, was that "the entire text of the thesis has been carefully examined......" (Foreword). But, even then, as a matter of fact, she did neither change the mode of exposition nor, except on some unimportant and marginal details, the content of the thesis. Some times authors do not change the central contention as well as the mode of exposition of their works published years earlier. But such a decision is backed by the consideration of the historical importance of the work. I can cite two prominent examples of this sort, namely : A. J. Ayer's "*Language, Truth and Logic*" and Bertrand Russell's "*Principles of Mathematics*". Although each one of them is convinced that in the light of the later development of philosophical thought, the later editions should have been either throughly or partly modified, none of them did actually do so. For, each one of the work as it was originally published, has had a tremendously important and profound philosophical and historical purpose to serve. But one thing is very important to remember in this context. Although neither Ayer nor Russell did change the content and mode of the exposition of their work, each one of them has written an extensive introduction and both of them have suggested what parts of their work were affected by later developments and what modifications they would be prepared to introduce in the light of later developments. Has the present work any such purpose to serve ? Inspite of this the author did not modify it in the light of the later developments of philosophical thought. But she herself is, in principle at least, prepared to change her mode of exposition. But the fact is that she has not. It is hard to understand the attitude of the author who seems to think that there is not even a minor slip in thinking, that her consideration of the problem of value is complete without involving even a cursory reference to the works of J. N. Findlay, and P. W. Taylor or that her consideration of the arguments for the existence of God is complete without involving any reference to J. N. Findlay, W. P. Alston, N. Malcom, J. J. C. Smart etc., or even that her consideration of Religious Language and Symbolism is complete without a reference to E. L. Mascall, I. Ramsey, F. K. Ben, Rudolf Bultmann, Frederick Frere, Willem Zuuerdeeg etc. As a matter of fact the bibilography at the end of the book includes only three works published after 1959, the year of the acceptance of the thesis (1) H. D. Lewis (Our Experience of God, 1960), (2) W. T. Stace (Mysticism and Philosophy, 1961), and (3) Vessey (ed.) (Talk of God, 1969). Except for these the book leaves, it seems, every other stone unturned. The only point that is intended to be emphasised here is that the author has neither modified her thesis in the light of later developments of philosophical thought nor has she written an extensive introduction, granting that for some reason it was not possible for her to modify or rewrite the thesis, indicating whether, how far and in what way these later development would have modified her central contention and if so what would be her reaction to it. It is this that is to be greatly regretted.

Perhaps, too, one may not mind even this, provided at least the major argument of the work stands up to a rational scrutiny. "The pivotal point" of the work, as stated earlier, is "a reconsideration of the idea of God as the Ultimate Reality and Harmonizing Principle". It also aims at "deciding the nature and significance of the idea of God as the Supreme Value". Anybody who attempts to consider these expressions critically would find them highly confusing. Consider, for instance, the expression "the idea of God as the Ultimate Reality". Not bothering to consider what is meant by "Ultimate Reality", and presuming, for the sake of argument, (although the author has nowhere made it out explicitly), that it amounts to the first-order ontological reality, let us ask what is this Ultimate Reality, God or the idea of God ? If the first, it is extremely doubtful whether God is ontological in the idealistic conception of it to which the author subscribes, and if the second, it can never be ontological unless we confuse between a thing and an idea of the thing. The same God (or idea of God ?) we are told, is also the Harmonizing Principle—harmonising principle of various values of course ! Now, is God Himself the harmonizing principle or is the principle itself God ? If the first, then it amounts to anthropomorphism, while if the second, God ceases to be ontological. God is also said to be the Supreme Value. This contention is highly misleading. But the author does not find it to be so. The reason being "in the last analysis, it", (i.e. value) "becomes identical with Reality" (p. 50). Over and above taking distinguishables and separables to be identical, the entire argument commits two errors : (i) even if it is granted that God or Reality is (assuming that they are the same) saying that each one of them *is* does not amount to saying that each one of them '*is*' in the same sense ; (ii) even if it is granted that 'both facts and values are given' (p. 48), they are not 'given' in exactly the same way nor are they identical. But the author does not accept this. Although, according to her "the difference between facts and values is not of kind but of degree" (p. 48), yet ultimately thay are identical. 'Reality', according to her, 'expresses itself through both facts and values, things and minds' (p. 49), and yet in the last analysis, "Reality and Value are identical" (p. 50). I presume, and I think I am not far mistaken in presuming so, that according to her the terms 'reality', 'fact' and 'thing' are synoymous. I wonder whether she would be prepared to make any allowance for 'facts' belonging to different spheres of consideration. But if she is not, she also, it seems. confuses different spheres of consideration like ontological, epistemological or logical. Without dwelling further on this point let us, however, proceed. The whole line of argument through which the author comes to identify reality with value seems to be : "Values are real and Reality has Value" (p. 69). Granting that values are objectively real and that reality has value, it is very difficult to make sense of this argument. Perhaps what is intended to be said is that having value is a necessary condition of something being real. If this is what is intended, it is hard, if not impossible, to subscribe to it. If, on the contrary, having value is considered to be a sufficient condition of being real, I see no line of argument in terms of which identity of value and reality can follow. What perhaps may be thought is that reality has objective value. But perhaps even this may not follow. What can be said is that that which is real is (objectively) valuable. It of course need not necessarily be so. Now, having value is one thing, being identical with value is quite another. Granting that the real is valuable, what follows is that the real (reality ?) has value. But the distinction between them does not vanish. That this kind of confusion the author does make is quite clear. Her confusion, it seems, arises from the fact that in regard to both fact and value, we say that they 'are'. The author fails to notice the difference between the two senses of the verb 'to be'. Perhaps, truth, beauty, goodness are ascribable to God; but thereby God Himself does not become any one of them; nor does He become Supreme Value, even though supreme value is, perhaps, ascribable to Him as the Supreme Reality. God may be considered as supremely valued or supremely valuable but not as supreme value itself.

Thus her central thesis does not stand. No one should, however, think that the central point of the work alone is mismanaged. Otherwise too, the work appears to be not free from errors such as (*a*) Mis-statement of facts e.g., we are told that according to logical analysis (meaning thereby Logical Positivists or Logical Empiricists) "propositions can be divided" (classified ?) "into three kinds (i) Factual propositions, (ii) Analytical propositions or definitions and (iii) the so-called synthetic apriori propositions". (p. 25). (*b*) Inconsistencies—e.g., we are not only told that difference between fact and value is only of degree and not of kind, (p. 50) but we are also told that "Reality itself is the value-frame,.... The value-frame involves the totality of values, which constitute, at the same time, the Absolute Spiritual Reality...., the ground of all values." (pp. 139–40). (*c*) Flat contradictions—e.g., on the one hand we are told that "owing to the scientific discoveries and their practical utility, nations and peoples of the world have been brought nearer" (p. 125), while, on the other hand, we are also told that in spite of the scientific investigation 'divergencies and rivalries have not been mitigated ' (p. 125), or although we are told that "every group of people shows a tendency to think of itself as being in some sense or other, 'a peculiar group of people' " (p. 125) yet in the utopian ideal world-state that is proposed to be achieved 'the kingdom of God and world community' (p. 132) the entire world is to be placed under the leadership of 'the real leaders of the world' who are 'those men and women who have directly realised God and, therefore, have been transfigured" (p. 133). The more we consider the work and the arguments presented therein, the more do we meet with specimens of the arguments of the kinds presented above.

Language is a property of the human race. So too is the general syntactical and semantical sturcture of a language open to the entire human race without any restriction, whether geographical, temporal or spatial. In the same way, neither sense nor non-sense have any boundaries. The author maintains: "In addition to the ancient and modern philosophers who are well-known Idealists" (I am afraid one may not agree with her here and perhaps quite pertinently) "—viz., Plato, Aristotle, Spinoza, Leibnitz, Kant, Hegel and neo-Helgelians, there are also some recent thinkers like Sorley, Hartmann, Urban, Taylor etc. who defend the idealistic notion of value. The present work substantially agrees with this idealistic trend...." (p. 15-16). Now, one may not have any objection, in principle, to this. One may adopt any stand point provided one does not ignore the demarcating line between sense and non-sense, however thin it may be. One may perhaps, again, not have an objection to the contention of the author that 'Mystics all over the world agree' in their assertions. What is meant by this is, perhaps, an agreement in the content of their assertions. But the remarkable similarity, nay sameness, not only of content but also of expression, between the present work and some of the published works, referred to is so astonishing that any reader would wonder whether all those authors are also mystics, even if the present author is one. To substantiate this judgment we give below cross-references. It is for the fear of undue length of the review article that we abstain from quoting every instance of this kind. Anybody, who would take sufficient pains, would be in a position to locate them. We select six authors and give cross-references. They are as follows :

(i) (*a*) Hill, T. E.; *Ethics in Theory and Practice;* pp. 32–35 and pp. 30–31 of the present work; *Or* pp. 188–189 of Hill's book and pp. 31–32 of the present work.
  (*b*) Hill, T. E.; *Conteporary Ethical Theories;* p. 313 and p. 36 of the present work.

(ii) Lepley, Ray (ed.); *The Language of Value;* p. 232 and p. 162 of the present work;

(iii) Urban, W. M.; *Humanity and Deity;* pp. 166–67 and the paragraph starting from "This arguement...." on page 90 of the present work;

(iv) Paton, H. J.; *Modern Predicament;* pp. 191–192 and p. 91 of the present work.

(v) (*a*) Taylor, A. E.; *Elements of Metaphysics;* pp. 337–342 and pp. 112–113 of the present work.
  (*b*) Taylor, A. E.; *Faith of a Moralist;* pp. 61–62 and p. 49 of the present work.

(vi) Radhakrishnan, S.; An article entitled 'Religion and World Unity, in the book, "*Religion in the Modern World*" pp. 74–75 and pp. 125–126 of the present work.

These are not the only expressional similarities or samenesses that one can locate. But the examples we have cited, we trust, would at least serve as part of the evidence in support of our contention. What should one say when one notices such similarities without due acknowledgements ? I wonder whether mere enlisting the works in the bibliography would suffice. I think the learned and sensitive readers would easily be in a position to form their judgment and hence I leave this matter to the judicious discretion of the learned readers.

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DIALOGUE

Canadian Philosophical Review—Revue Canadienne de Philosophie Vol. XV — No. 2—Juin/June 1976

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Comptes Rendus—Book Reviews

Sharma, (Dr.) Brajanarayana : *Bhāratīya Darśaname Anumāna;* M. P. Hindi Grantha Academy, Bhopal (M.P.), pp. 575; Price : Rs. 25/–.

Studying Indian as well as non-Indian philosophers and philosophical disciplines through the medium of Indian languages is gradually taking deeper roots. In order to be able to do this what is required is readily available text-books and reference works useful for students, researchers and teachers. Dr. Sharma's book is a comprehensive reference work dealing with the discussion of the problem of inference and issues connected with it as it occurs in the writings of various thinkers who are also adherents of different philosophical schools and thought-currents in India. Taking into consideration the data that Dr. Sharma has so painstakingly collected, arranged and presented he should be congratulated. His claim that such a comprehensive work on inference in the context of Indian Philosophy is available neither in Hindi nor in English is right and the effort of Dr. Sharma in this direction is commendable.

Notwithstanding this merit of the book, however, I want to draw attention to three very serious shortcomings of the work. If shortcomings of this kind are attempted to be removed successfully either in the future editions of the work or in the forthcoming works of this kind, at the hands of either the present or other authors, posterity will certainly profit from them.

Coming to the first point. Dr. Sharma rightly holds : " It is well-known that we do not have a systematic history not only of different philosophical schools of our country but also of the connected philosophical thought put forth by the adherents of the various schools. Especially, no authentic account of the *development* of their thought regarding inference is available". (preface p. 7 Translations and italic mine.)' This is the case as far as things go. Anybody reading these lines of Dr. Sharma would obviously expect his work to fulfil this lacuna. Now,when anybody proposes to undertake a work of this kind, the kind of development that he may delineate may be either chronological or logical. But unfortunately on any count Dr. Sharma's book fails. It fails not so much because it has left any stone unturned in gathering the requisite data but in putting the data in the developmental model he proposes to put. What one gathers from the book is : who has said a particular thing and in which work. But beyond this on the developmental count the readers do not gain. One rather gathers tabulation of the data. But just tabulation of the data is not a developmental account of the problem–chronological or logical.

Further, Dr. Sharma grants that Indian Philosophical schools flourished almost contemporaneously. (p. 27) But merely granting this will not suffice. What is further required is an inquiry into following main considerations : (*a*) what were the intellectual interactions among the various schools of Indian philosophical thought ? (*b*) why were they necessitated ? and (*c*) what were their outcomes ? In this context it would have been most appropriate on the part of Dr. Sharma to ask and attempt to answer the question : would it have been both possible and necessary for Nyāya to arrive at the kind of frame of inference it did arrive at within the fold of its former frame of Padārthas ? What was the role of its confrontation with Buddhism in this context ? But Dr. Sharma nowhere raises questions of this kind.

Secondly, Dr. Sharma holds two theses almost as a matter of commitment : (*a*) Indian philosophical schools are complete in themselves (pp. 8, 457) and (*b*) writers like Prof. Keath and Dr. Randle etc. are seriously mistaken in holding that there is a considerable impact of Diṅnāga and other Buddhist writers on later Nyāya thinkers (pp. 9, 258). But on both these counts Dr. Sharma is inscrutable. If one grants that there was a cultural exchange between various schools of Indian philosophical thought. to say in the same breath that every philosophical school in India is complete in itself is a grotesque confusion. For, if each one of them is complete independently of the impact of another, then interexchange among them is redundant and serves no philosophically significant purpose. But if each one of the schools becomes ' complete ' in itself due to such interaction, its so called completeness is jeopardised. If, on the contrary, what Dr. Sharma means is completeness of all schools of Indian philosophical thought taken together, it is hardly significant. Secondly, criticising the contention of Prof. Keath and Dr. Randle etc. about the impact of Diṅnāga and other Buddhist writers on later Nyāya thinkers Dr. Sharma's argument is fallacious on two counts. First, Dr. Sharma himself grants that there is a considerable impact of Diṅnāga on later thinkers of various schools (p. 36). He also grants that Diṅnāga was the progenitor of some of the fundamental considerations with reference to the problem of inference (p. 26). Moreover, he also holds that predecessors of Diṅnāga like Nāgārjuna, Maitreyanātha, and Asaṁga have explained many issues relating to inference (p. 258). Yet, overlooking this, the main thrust of Dr. Sharma's endeavour is of establishing that it was Diṅnāga who is indebted to Praśastapāda and not vice versa as some critics maintain. But, it appears to us, that Dr. Sharma's argument is unconvincing. He has not independently established that Praśastapāda is chronologically prior to Diṅnāga. Can they not even be taken to be contemporary of eachother ? How is one to establish Dr. Sharma's claim that Praśastapāda is closer to Gautama rather than to Diṅnāga ? Would it not have been possible for Praśastapāda to be indebted to Diñnāga on the one hand and yet in his adoption of terminology, formation of problems and style be closer to Gautama on the other ? Further, how do we know, independently of later Nyāya thinkers, that either Gautama or Vātsyāyana or both of them had exactly the same kind of development of their thought in their minds as it occurred later at the hands of Praśastapāda or Udyotakara ? Moreover, accepting interexchange among various Indian Philosophical schools it is hard to understand the attitude of the author not to allow any impact of Buddhist writers and their terminology on the later Nyāya thinkers. Nothing except unjustifiable sense of originality attached to Nyāya thinkers can satisfactorily explain this phenomenon.

Lastly, there are certain errors in the book and we shall merely draw attention to some examples of this kind. They are : (i) the account of Anumāna on page 25 is in correct; (ii) the explanation of Udāharaṇa on page 26 is erroneous; (iii) the account of Anumāna in the first two sentences on page 74 is inconsistent; (iv) the contentiou on page 37 that Dīdhti, Māthurī, Jāgadīsī are Prakaraṇagranthas is wrong; (v) the contention that Western Logic lacks in Philosophical foundation and what one finds therein is a discussion merely of linguistic problems (p. 26) is totally unfounded; and (vi) there is nothing like Middle Proposition (p. 465) in any Syllogism. To hold that there is, is an error of a very serious kind. More instances of this kind could be pointed out. We request the author to rectify such mistakes in the next edition.

The value of the book would have been enhanced immensely if it were appended with subject-index and author-index and also if binding was done more carefully. The cumbrous way of giving references at the end of the chapter in running lines should have been avoided. Errors of printing, which are numerous, should be corrected.

In spite of such shortcomings it will have to be unanimously accepted that Dr. Sharma has collected invaluable data and industriously presented them in the work. We whole heartedly recommend the book both to students and researchers of Logic in general and Indian Logic in particular.

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M. P. Marathe

ANNOUNCEMENT

The Indian Philosophical Quarterly invites critical studies and assessments of the thought and contributions of contemporary Indian Philosophers. In this connection we propose to publish a few such selected studies dealing with the work of Professor K. J. Shah, Karnatak University, Dharwar. Articles and studies are accordingly invited.

We similarly invite responses to the interesting article "On the Frontiers of Microphysics and Metaphysics" by Shri M. D. Vidwans, published in the present issue.

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The Indian Philosophical Quarterly is glad to announce the commencement of a Students' Supplement from this issue onwards. Articles and Reviews not exceeding 10 typescript pages from bona-fide students are invited. Such contributions may be sent to the Editors, Indian Philosophical Quarterly with a bona-fide certificate from the Department or Institution.

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Individuals and Worlds

Essays in Anthropological Rationalism

D. P. CHATTOPADHYAYA

The fallibility of man, the socio-historical character of knowledge and the limits of human reason and experience are some of the key concepts of anthropological rationalism. Whereas classical rationalism ignored the human presupposition of reason and glorified it into a supreme static achievement, classical empiricism was so perturbed by the fallible character of human knowledge that it ended in irremediable scepticism. Dr Chattopadhyaya discusses the shortcomings of 'arrogant and ambitious rationalism,' and 'the one-dimensional image of man' which result in a positivistic or superficial world-view. Theories of knowledge and reality taken in abstraction not only differ, but the rationale of the differences also remains unintelligible unless the different dimensions of man's ability and existenc —symbolic, social, theoretical and practical—are adequately analysed. From this point of view, the author finds the traditional distinctions between realism and idealism, empiricism and rationalism, essentialism and existentialism, more or less untenable.

Dr Chattopadhyaya has been a Minister of the Government o India since 1971, but he also remains a dedicated and creative philosopher. He is the author of several philosophica papers and two other books, and was Reader in Philosophy, Jadavpur University, before becoming a Minister. He has doctorates both from the Universities of Calcutta and London, and at the latter was a pupil of Professor Karl Popper.

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